ART INSTRUCTION

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ART INSTRUCTION IN ENGLAND

BY

F. EDWARD HULME, F.L.S., F.S.A.

AUTHOR OF 'FAMILIAR WILD FLOWERS'

'MATHEMATICAL INSTRUMENTS AND HOW TO USE THEM' ETC.

'I hold every man a debtor to his profession: from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavour themselves by way of amend to be a help thereunto'—BACON

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PREFACE.

THIS little volume is not designed to supersede the instructions of the Art-master, or to enable the reader without further aid in other directions to pursue the study of Art for himself. Its purpose is simply to point out what subjects are taught, and how and why they are taught; to illustrate the value of Art-teaching; to show that it is not merely a luxury for the rich, but a thing almost of necessity for all, whether rich or poor; to indicate the modes in which it aids the business of life, whether directly or indirectly; to trace it from the lowest grade school, and the feeblest efforts of the youngest child, to its highest developments under the instruction of learned specialists in our universities.

My object, in short, has been to help forward the cause of Art-education generally; and in the furtherance of this important work the following pages may, I trust, be found useful.

F. E. H.

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An interest in art is no exclusive possession of the few, and where formerly its practice was of the most limited nature, it at the present time numbers its followers by hundreds of thousands. Within a period well within the memory of most of us drawing was an 'accomplishment' and an 'extra;' now

thousands of children study it more or less successfully as a part of their regular schoolwork. Twenty years ago it was too commonly a delusion and a sham; now its results, if less showy, are tangible and genuine. Twenty years ago the artisan had neither the opportunity nor the desire to devote his hard-earned leisure to its pursuit; now he has both, for scattered broadcast over our country are hundreds of schools and classes open to the artisan class, and these rooms are nightly filled to overflowing. It has been in some quarters too much the practice to depreciate the Government teaching of art, but adverse criticism could only be the result of perverse prejudice or lack of knowledge, and we would desire in the fore-front of our remarks to declare our emphatic belief that the benefit wrought nationally by the institution and maintenance of the Science and Art Department is literally beyond estimate. By its staff of trained teachers, by its art collections, by its wide-spreading system of examinations, by its large and well-furnished Schools of Art in every large town, and humbler night classes in smaller centres of population, it has imparted sound instruction far and wide, and has given opportunity of testing how far it has been received.

The cottage child bears proudly home its prize, a stimulus to greater efforts in the future, and in the collections stored in its museums or circulated through the land, the finest examples are accessible to all. Twenty years ago, too, illustrated books were few in number, and now the artistic treasures open to us are so numerous and so cheap, that we run some little risk of undervaluing so wide-spread a boon. Ten years since one or two high-priced periodicals on art sufficed; now a section on art is a necessity in almost every serial, and a dozen magazines deal with art matters as a whole or treat one of its phases, and find a numerous body of readers. Universities open their doors to the new culture; and exhibitions of pictorial or decorative art yearly multiply, and on every hand we see indications, hard facts that we need not further particularise, establishing the truth of our opening proposition,

that art is no longer a luxury of the wealthy, but a national possession.

Art may be approached from two very different directions, and either extreme is an error. With some it is an æsthetic cultus not to be profaned by any suggestion of practical service; with others it is too rudely bound down to gross utilitarianism, and all its essence quenched in the bluff *cui bono?* What use the possessors of art power and knowledge make of it is a question of considerable importance both to the holders and all with whom they come in contact; but into this we may not here go, our present consideration being the acquirement of the art power and knowledge itself. Our pupil then stands before us; what shall we teach him and how shall we teach it?

Our fathers and mothers, but chiefly our mothers (for drawing was a mere accomplishment, and the boys were rarely troubled with anything so unpractical) had their weekly lessons in drawing, and very unsatisfactory these lessons were. The system is now almost exploded, but its reform was attended by great difficulties, the opposition of the pupils and the ignorance of the parents being two of these. As drawing was an extra and the master got the whole or the greater part of the fees, the approval of his pupils became a paramount consideration; and, as acquiescence in the system meant income, and the abjuration of it penury, it will readily be seen that a third great obstacle in the way of reform arose. These difficulties are still to some degree felt, and the old system yet lingers in some ladies' schools. The system is simply this, the blind copying of drawings, often themselves faulty, but in any case as mechanical and senseless an operation as can well be imagined, and of as much value in the acquirement of real art power as the careful copying by one of these ladies of a page of Greek would advance her in the study of that language. As it was necessary to make a grand show, no time could be spent on any grounding in the rudiments,

but something very large and bold (this latter a very favourite word) was put before the pupil, and all imperfections had to be set right by the touching up (another favourite expression) of the master. The result, as meretricious and unreal as anything could possibly be, was then mounted as 'our Isabel's drawing,' a compound of sham and fraud ; was hung in the paternal drawing-room to the satisfaction of all parties, for the young lady got unbounded praise, the professor received his fee, and the parents were proud to have such a daughter. We once heard of a teacher who, as the term grew near its end, used to collect the drawings of his pupils, hire assistance, and sit up almost night and day 'touching up,' putting in trees, dashing in clouds and brilliant flashes of light on lakes and foam on torrents, until the result was so tremendous that the pupils did not know their own work again. This is a literal fact, for we could, if need be, give the name of the school. When the parental commendations were at Christmas unstintingly bestowed, the young geniuses must often have had an uneasy feeling one would imagine, and had some practical father desired his daughter to make a copy of her drawing for him in the holidays the bubble would have burst most effectually.[1] All delicacy and refine-

[1] 'Whatever my natural artistic powers may have been, they have been sadly discouraged in youth and in middle age. I took lessons in drawing at school. I brought back, with the assistance of a kind and attentive drawing master, a beautiful drawing of a church. I remember well the pride of the family circle ; but it had its fall when, upon being asked to reproduce the sketch, I found it impossible to do so in the absence of my master. I found myself later at Rome, at an age which I then thought old, which I now think very young. I was intoxicated by the artistic atmosphere of the place. I sought out an eminent artist, who I knew was sometimes induced to give lessons. I asked him whether I was too old seriously to study drawing. He answered that he had known persons who had begun when older, and who had met with complete success. My first lesson was as good as settled when he put a piece of paper and pencil into my hand, and requested me to draw something out of my own head. I immediately produced and handed to him with some satisfaction a pretty little composition. If I remember right, there was a cottage, a silver fir, and a bush. The eminent artist was so much pleased with the perfection I had already

ment of work was thrown to the wind, those in fact who drew in so masterly a way could not even understand its charm or produce it, and as greater blackness and boldness could be realised in chalk than in blacklead, the former was the favourite medium, and the result an abomination. We have seen young pupils, girls of ten and eleven years of age, drawing heads at a private school, the original example and the copy each squared all over, and the work filled in much as a piece of Berlin woolwork would be. Graduated tints are another sham, and we have even seen chromolithographs in which some few portions were left blank; these were to be filled in by the pupil, the total result being a so-called water-colour drawing.

We had already written thus far before turning to see if the Schools' Inquiry Commission referred at all to this matter, and we find our own comments echoed back with startling distinctness; surely if it be true that in the multitude of counsellors there is safety, we may well strengthen our case by some of the evidence we there find. Mr. Gifford, an Inspector of Schools, reports as follows: 'The same love of display which prompts parents to make their daughters learn instrumental music gives a character also to the drawing practised in ladies' schools. To the parent the test of proficiency in drawing is the ability to make pretty pictures, and girls are often allowed to draw in oil and watercolour before they have got hold of the elements of perspective.' In another place we read: 'Drawing from finished copies of heads in pencil, sepia, and watercolour is encouraged or allowed to the exclusion of the less attractive but more necessary subjects of geometrical drawing and perspective.' In another report we find the following passage: 'The teacher, unless he be a man of exceptional strength of character, feels his dependence upon the parents as an annoyance, it may

attained that he handed it back with the observation that, on the whole, he advised me not to take lessons.'—LORD GRANVILLE, *at the Royal Academy Dinner of* 1882.

be, a degradation. If the desire to please them stimulates him, the knowledge that they must often be pleased in some unworthy way mortifies even if it does not tempt him. It may be said that the dealer in education is, after all, no worse off than any other dealer. This is only to state the evil in another form. A person entrusted with such important functions ought not to discharge them in the spirit of a dealer, nor to be looked on as such. Moreover, so far as it is an argument it is a false one, for the teacher is thus much worse off than any other dealer, that as there is nothing about which the customer knows so little as about the education of his children, so there is none in regard to which he is more unreasonable and capricious, requiring the seller to gratify his passing notions, and objecting quite as much often to the goodness as to the badness of the article.' Another inspector meets the same difficulty as he visits the schools for the children of the great middle class : 'Drawing lessons,' he finds, 'are very generally given by visiting teachers and local artists, amongst whom are some of real merit who take their pupils through a judicious course. But more than three fourths of the drawings which have been offered for my inspection are meretricious performances, in which high colour and deep shading are more conspicuous than careful outline and good taste. There is no easier way of gratifying ignorant parents than by a showy picture or map, and it is very unlikely that a struggling teacher who wishes to keep his pupils will long resist the temptation to slur over the rudiments of the art in order to produce presentable drawings as early as possible.' It will thus be seen that we by no means stand alone; but that we may not miss the benefit of cumulative evidence we will ask the forbearance of our readers while we add one more testimony, that of Mr. Fearon. In dealing with the subject of drawing he reports : 'Many of those who teach it do not understand how to teach. It is often supposed that because a man is a tolerable painter he is fit to give instruction in drawing to classes of children.

This is a mistake; a man requires training in the art of teaching drawing as much as in that of teaching arithmetic and grammar. It is in the grounding of their pupils that these teachers generally fail. They have not the patience for their work, and they do not realise the fact that they should labour to train the hands and eyes of the many rather than to push forward one or two clever pupils. As a general rule they do not work upon good principles, they do not require their pupils to go through a strict course. Many of the teachers admit that if a boy is to be made a good draughtsman he must be put through a regular course, commencing with freehand outlines from the flat, passing on to outlines of objects with perspective, and thence to the complete shading of objects. Yet when one goes into many schools where drawing is taught, one sees that after the boys have been tried a little in outlines from the flat they are passed on to copying shaded figures and landscapes, still from the flat, and thence, perhaps, proceed to colouring, without ever having studied from the round at all. Thus they miss the true object of drawing, which is to give the eye an insight into nature and train the hand to convey to a flat surface the forms and objects which she presents. They miss the education of the eye and hand, and their work is really of little value. All the teachers with whom I spoke admitted the truth of these views, but they said that public opinion is not sufficiently enlightened on this point, that parents wish to see some pretty results of their children's drawing which may be exhibited on the school prize-day and afterwards framed and hung up at home, that the children dislike the strict course, and that, as they have the ear of their parents, the master's salary depends upon pleasing them. I have no doubt that much of this is true. In some schools the head master has even shown me with great satisfaction a quantity of "pictures" on graduated tinted paper which he evidently thought were proofs of much advance in art. There are great difficulties in the way of the

study of drawing at schools. A good drawing class-room ought to be lighted and furnished in a peculiar manner, and few school buildings have a room to spare, or one built suitably to the purpose.'

Things have greatly improved since these reports were furnished, thanks to the prestige with which a teacher of the Government Art School is armed; but the old system is hydra-headed, and still appears from time to time, and will probably long continue to do so; neither our own remarks nor our confirmatory quotations are quite out of date or refer wholly to a past state of things. In no other subject do pupils and masters begin at the end, and attempt finished work at the commencement of their study. Writing has its straight strokes, languages their grounding of grammar, and a youth serves a long apprenticeship if he would learn to make boots or grain a door; but little Miss in her first term springs Minerva-like into being as an artist, and produces work that is proudly hung above the paternal mantelpiece, thus missing by some few feet its proper destination, the fire-grate beneath.

All work of enduring value costs effort and downright labour, and the path to excellence is no easy one. Masters and teachers can smooth it in a degree, but after all needless difficulties are removed it comes at last to the downright hard work and persevering industry of the student. 'Those who are resolved to excel must go to their work, willing or unwilling, morning, noon, and night; they will find it no play, but very hard labour.'[1] This rather disposes of one favourite question of one's pupils, 'Is this good enough, sir; will it do?' To which one may well reply, 'Is it your best? because if not it is not good enough; good enough is not sufficient if better can be done;' but if it is the best, bad as it may be, it should be promptly recognised and accepted. The practical teacher will soon find that various dispositions require various treatments; the over forward and conceited

[1] Sir Joshua Reynolds.

require a judicious application of cold water and a pitiless analysis of their work, while the unduly humble that fear almost to touch the paper with their pencil, and who no sooner draw a line than they erase it, should receive every encouragement. Practically we have found with the latter that it is often a good plan to take the indiarubber away from them for some little time. They are really anxious to please and do well, and when they find that what they do cannot instantly be erased, after the first horror of the shock to their morbid sensibility, self-reliance comes in with tonic effect. Insubordinate pupils must of course feel the arm of authority, and it would be needless to refer to them at all, except as giving us the opportunity of saying that the teacher must most distinctly be the master. A schoolboy too generally looks upon drawing as a recreation, and though he would never dream of dictating the exercises in Latin, or the rules in arithmetic that he chooses to study, he at once grows critical when the drawing-lesson begins. One copy he does not like, another he is sure he cannot do; if allowed his own way he becomes a tyrant to the master, the two in fact change places, while if firmly checked he often takes refuge in temper or indifference, exhibiting the drawing over which he has taken neither pains nor interest as a proof that he was right in thinking it too difficult.

Drawing is one of the most powerful means of arousing the perceptive faculties, so that even if it be of no practical use (as the word practical is ordinarily estimated) it is excellent as a discipline. The power of the eye thus gained, the delicate and accurate appreciation of forms, the patient striving after their representation, the physical power actually acquired by the eye under such discipline, are all of great value. Our own master, Richard Burchett, for many years the head of the Kensington Art Schools, thus happily expressed this view:—'Regarded aright, drawing, in general education, is the most potent means for developing the perceptive faculties, teaching the student to see correctly, and

to understand what he sees. Drawing, if well taught, is the constant practice of the analysis of forms. By this practice the eye is quickened and rendered incomparably more accurate, and as the eye is the most open and ready road through which knowledge passes to the mind, the full development of its powers can be a matter of no small importance to all; in this respect, then, as an educator of the eye, drawing is a most valuable means, irrespective of any service the power may be in itself. Drawing, therefore, is a most valuable discipline in early education, if it be viewed merely as a means of development of the faculties, and one equally fitted for all ranks and both sexes, and this must be constantly borne in mind as one of the causes of its utility, that it teaches to see and to do all things more perfectly, that it is a development of the general intellect of the country in an eminently practical direction. There can be no doubt but that drawing, if properly taught, is a most efficient means of developing the perceptive powers of the mind, and of the greatest use to all, for it may be truly said that no one can know forms or objects thoroughly who cannot draw them, and that no one does know any form or object thoroughly until he has drawn it. This assertion may be doubted by those who cannot draw: it will never be by those who can.' Our greatest writer on art, John Ruskin, fully confirms this valuable power of art-teaching:—'He had said that drawing enabled them to say what they could not otherwise say, and he said, secondly, that drawing enabled them to see what they could not otherwise see. By drawing they actually obtained a power of the eye and a power of the mind wholly different from that known to any other discipline, and which only could be known by the experienced student; he only could know how the eye gained physical power by attention to delicate details. A person who had learned to draw well found something to interest him in the least thing and the farthest off thing, in the lowest thing and the humblest thing. He did not know anything connected with drawing that had *not something interesting* about it.'

Drawing as an element of education differs from many other school subjects in this respect, that whereas history, for instance, is a study for the brain and memory, drawing requires both memory, thought, and actual practice; hence many schoolmasters grudge it its due place in the curriculum on account of the time thus involved. This in the present day, owing to the multifarious subjects comprised in the word education, is no doubt a difficulty. Nevertheless, in the general crowding out, the time spent in drawing should not be the first trenched on. It has many advantages, direct and indirect, and is well worthy of its place. In some schools drawing is made an out-of-school subject, and any boy who learns must do so while his fellows are in the cricket field. Drawing is work as much as any other subject, if it be properly taught and studied, and it is placing it under heavy disadvantage thus to shelve it. Many do not study it at all because they say that it will be of no value to them in after life. There is such a thing as culture for its own sake, but even on utilitarian grounds its uselessness to these persons is by no means clear, for in the chances and changes of life a knowledge of it might under some circumstances prove, when too late to acquire it, to be of the greatest value. One illustrative example will have more weight possibly than a large amount of theoretical disquisition. Amongst our pupils was one who was so often engaged in other work that his attendance with us became a merely nominal thing. He left the school suddenly, as an excellent opening for him in a land surveyor's office presented itself. Without wishing to depreciate the Latin verses upon which so many hours of his valuable time each week had been spent, of how much more practical value would his drawing have been to him?

We have heard more than once of schoolmasters being willing that their pupils should learn drawing from the indirect benefit of the great improvement it made in their writing. It seems only reasonable that this should be so, as writing and drawing are each imitative and should mutually act and

react. A child, for instance, who has copied a capital R or M has, in ordinary language, been writing, but may just as truly be said to have been drawing, and many a letter presents a more complicated form, and a more serious obstacle to the beginner, than the form that would be given as a rudimentary example of drawing. The two pursuits may well be practised concurrently, each aiding the other.

Where drawing from solid objects is practised (and it should form an important feature in every drawing course) it is desirable to have special accommodation. We have sometimes had to give instruction in a room lighted on each side, rendering it impossible to get clear light and shade on the objects to be drawn from. Another great advantage in a special room is that no time is lost in taking out groups of models and then returning them to some cupboard, for the group once set up can remain untouched as long as may be required, and those who are interested in their work can come in and go on with it whenever they have opportunity. A local habitation moreover gives prestige to the work, and the room being under the care of the art-master, he sees that the desks are not cut about, and he is able to hang good examples of work round the walls as standards for his pupils to work up to. These standards may most advantageously be the works of former pupils, as their successors feel that what others have done can be done again. Intermingled with these may be a few of the choicest things obtainable, that one's pupils may see all that can be done, and be spurred to a fuller emulation. We have sometimes had to take our pupils at desks so cut about that no good line was possible, so dirty that a few minutes' work defiled the paper hopelessly, so shaky that when one boy was using his indiarubber all the others at the same desk had to stop working. Progress and interest in such a case becomes impossible. At all the highest schools a room is now set apart exclusively for the art-work. Where large classes have to be taught simultaneously much individual attention becomes

impossible, and black-board demonstration for the benefit of the whole class is an essential. Even when all start fairly, some by natural aptitude and greater zeal will draw ahead, and the master, while naturally drawn to those who appear to profit most by his instructions, must bestow, if possible, still more attention on those who are falling behind. Where the numbers are at all large the classes should be subdivided according to drawing ability; but in large schools, where the drawing has to fit in with the general school work, the art-master has to take the school classes as he finds them. This greatly complicates matters, for the highest class in the school may contain members who in drawing power are simply nowhere, while the best drawing boys will be found appearing some in one class and some in another. If we imagine the case reversed, and all the boys having to be taught Greek in classes founded on their drawing proficiency, the schoolmaster would see the absurdity of the position at once. Where boys come as a part of the regular school work, a greater control can be exercised over them, and all can be made to conform to a course that is good for them, though in this case we get the indifferent as well as the appreciative, and have to fight against apathy and the *vis inertiæ*, while boys who come out of school hours are too apt to feel that they are, on the whole, patronising the subject by appearing at all, and rather resent too rigid a course. The art-master should always give marks for the work done in each lesson; these marks should bear a fair proportion to the marks given for other subjects, and should be added into the pupil's general total. If a boy finds that for an hour's French he can get a maximum of fifty marks, while the most he can get for an hour's assiduous drawing is twelve, he will naturally draw conclusions unfavourable to the latter; but if he considers that he gets fair reward for his labour, and sees these marks swelling the total that affects questions of promotion, prizes, and general school status, the drawing hour is no longer under a disadvantage. The progress made

during the term should form a feature also in the general report that is ordinarily sent home in most schools at the end of the term.

We need scarcely say that boys are great observers, and the labours of the art-master will be sadly hampered if the old unworthy prejudice against art and artists is displayed by any of his fellow-masters. An art-master worthy of the name has passed through as rigid a course of preparation for his duties as any of his colleagues, but the old belief that an artist is necessarily a Bohemian, and that Oxford or Cambridge are the only seats of culture, is not altogether extinct. We have known the case of an art-master of position and education daily engaged in teaching at one of our large public schools who was entirely unaware of the presentation of a grand testimonial, over one hundred pounds' worth of silver plate, to the head-master, until he read an account of the affair in a London newspaper. Not only had he not been given the opportunity to contribute, but the matter was utterly unknown to him in any form or way until the newspaper came into his hand. This is a sufficiently striking illustration of the isolation of his position. We will add one other case that has come to our knowledge. At one of our largest schools it is the custom to trace the career of all the old boys as far as possible, and to take a legitimate pride in their successes since their connection with the school ceased. These records are published at irregular intervals some few years apart, and prefaced by the names, dates of appointment, &c., of all the masters who have been appointed during the period. Boys who have been but a term in the school have their arrival and departure duly recorded, masters who have stayed but a year are duly enrolled in this official record; but the art-master who for over a dozen years has spent his energies daily in the service of the school has no place in the list. Boys would naturally feel that they need pay little heed to the instructions of one who was so lightly esteemed, and we were assured that never had he

before experienced a tithe of the difficulty in maintaining discipline that immediately flowed from the publication of this book and its dispersal through the school.

It is needless to multiply such examples. We gladly turn to another side of the picture and find at another school an art-master so honoured in his work, so esteemed by his colleagues, and leaving so high a reputation behind him, that on his decease after a lingering illness ample provision is made for those who would else have sadly missed his care, the movement beginning amongst his colleagues and extending to the old boys, and being supported in a public appeal to them backed by the names of men of high rank, two baronets for example, a bishop, the President of the Royal Academy, and many others notable in science, literature, and art. At another school again we find a memorial tablet, erected at a cost of over two hundred pounds, to a late art-master in the school chapel. We have before us as we write a letter from one who both knew and honoured him, in which we read 'our appeal is made exclusively to friends of his, who are of course cognisant of his claim to be affectionately remembered by them;' and this appeal resulted in a finely sculptured memorial that is daily before the eyes of the school.

Having now indicated in what respect the old system of teaching drawing was defective, having pointed out the necessity of having proper accommodation for the work, and further indicated various methods, as marks and reports, by which the drawing should be felt to be a real element in the pupils' education, together with the advisability of honouring the subject by honouring its teacher, we now proceed to consider what instruction should be given.

In ordinary school teaching the instruction must necessarily be more or less rudimentary, the youth of our pupils and the short time they are able to give to the subject preventing us often from doing much more than laying a good foundation. On this can safely be hereafter reared any

amount of superstructure. If we take the case of a boy or girl only able to give one hour a week to drawing, only at school forty weeks in the year, and only learning at school for six years, the total drawing time will be two hundred and forty hours, even in this concentrated form not quite equal to thirty-five days of seven working hours each. A student attending the art classes at South Kensington has a working day of seven hours, and therefore does in the session of five months an amount of work equivalent to between twenty and thirty years of our schoolboys' opportunities; and a Kensington student will attend, not for a session merely, but for years, in order to acquire proficiency in art. At the same time, these rudiments are well worth the acquisition, and practically, despite our arithmetic, we have often been surprised to see how much can be done in the limited time.

The first subject which the beginner should take up should be freehand. This is often technically limited to outline drawings from flat copies of ornament, foliage, and so forth; but in a more general sense it includes anything, as the name implies, that can be drawn by the hand alone, and is therefore the opposite of instrumental drawing. In this case it includes drawing solid objects from nature, and may be held even to include the works of Raffaelle or of Michael Angelo. It becomes therefore a matter of some importance to candidates for examinations &c. to get a clear idea of what the term involves in the particular case where their knowledge of it may be put to the test. In all examinations conducted by the Science and Art Department, for instance, freehand and model drawing are two distinct subjects, and it is practically convenient in teaching to have the two words in use, as expressive of a somewhat different character of work; while in the Sandhurst or Cambridge local examinations the term freehand is very comprehensive, and includes model drawing, colouring, &c.

The early examples may be of the simplest character; but the curves should be true, and the forms to be copied

should be symmetrical. This practice gives strength to the hand, keenness to the eye, and enforces accuracy. In the old system a window or a tree might be half an inch out of its place, and the blunder would be scarcely perceptible; but in the more formal examples balance and proportion must be accurately given, or the error is at once conspicuous. Pupils who have been learning under more lax conditions often rebel at first at the stricter discipline, but many soon get to enjoy it, and in any case a youngster's prepossessions in favour of an easier kind of work need not greatly influence the master who is conscious that he can do better for his pupil than to yield to his wishes.

The master should always be at hand to point out sound methods of work, to indicate where improvements may be made, and to maintain order (a blind man coming into a drawing-school filled with pupils at work ought to be under the impression that the room is empty), but he must be careful not to do for the pupil what by a little assiduity he could do for himself, or idle pupils soon expect to be helped out of all their difficulties. Above all he must be careful never to find himself retrograding into 'touching up.'

Practically it will be found to be an advantage, when the class is large, to have all the drawings done on sheets of loose paper of uniform size, instead of in books. When the pupils have books, careless and idle individuals will begin a thing carelessly and then turn overleaf and repeat this perhaps more than once when the master's eye is in another direction. We now in large classes give out single sheets to each pupil as he requires them, and renew them when the work satisfies us. All names are written on them, so that they can be readily distributed at the commencement of the work.

Even where the work is collective and all are doing the same sort of thing, so that a few general instructions to the class at commencing are a valuable help, the classes should not be over large, or the instructor becomes lost in the dis-.

ciplinarian. Besides, the teacher, like anyone else, can only get sixty minutes into each hour, and if he has thirty boys to teach in that time, the share of individual attention to which each one is entitled is an easy arithmetical problem.

In school teaching hours are much more easily obtained than any longer periods, but where an hour and a half can be given it is far preferable. Things have to be distributed, pencils to be cut, marks to be awarded, &c., and all this in some degree curtails the hour even when a punctual attendance ensures a proper start, and when a pupil gets really interested in his work he feels the hour too soon over.

The earliest attempts at freehand drawing will probably be disheartening, as the progress will appear to be so slow; but that is unavoidable. Having planted our tree we must wait awhile for the fruit, and the facile touch ultimately grows out of the hesitating and feeble strokes, if only the pupil is careful to make the work as good as he can. Half-hearted work is worthless, and all young beginners are sometimes tempted to slur their work over; but this is a great mistake, for the completion of one drawing is but the signal for the beginning of another, and the second will be the more difficult in proportion as the difficulties of the first were evaded. Each step must mark a conquest, and beginners often need to be reminded that quality, and not quantity, is the standard by which their work will be judged. The sense of growing power will presently arise and encouragement will follow, but over-confidence is fatal; to attempt is by no means the same thing as to achieve, and the whole course of many a piece of work is marred because its opening stages were thought unworthy of attention. The drawing that begins all on one side ends all on one side, and all the subsequent additions cannot veil the fact that a false start was made. No small deceits, like bending the paper to get a central line, ruling, or measuring, should be for a moment allowed; any temporary success built on such a foundation is wholly worthless, and crippling to future work. In almost

all examination work in which freehand enters, the candidate is required to either increase or diminish his copy in size from the example, and in any case it is often good discipline to require the pupil to alter the scale of his work, care being taken to carefully preserve the due proportions of the several parts. Where one form comes in front of another the lower one should first be continued through and then the unnecessary part removed; failing this a broken and disjointed look too often results. The pupil must never be satisfied with a mere approximation; no melody played almost correctly is bearable, no arithmetical working that is only wrong in a figure or two here or there is tolerated, and a few carefully drawn examples will outweigh in practical value an unlimited number of careless renderings. The freedom that springs from mastery of the subject is admirable, the insolent freedom of ignorance and conceit only hurtful and altogether mischievous.

The power of outlining correctly is the basis of all subsequent success, and must precede everything else. Some amateurs are slow to admit this, and the result of their non-belief shows itself only too obviously through their ill-drawn oil-paintings or watercolour drawings. Beginners are often anxious to break away from this rigid drill, and want to shade or to paint, or to do anything else that will shirk it; but the faults of a defective outline are only intensified and its errors more patent than before when shading or colouring have given emphasis to them.

The larger forms should be blocked in first, and then the smaller details added. The preliminary sketch should be drawn very faintly at first, but not hurriedly or carelessly. When the copy is a symmetrical form, a central line should always first be drawn, then a portion of the left side before the corresponding portion of the right. When the right-hand side is drawn first the hand covers it in drawing the left side, and it is impossible to compare one with the other during the drawing. When time will not allow of the whole being

drawn at one sitting the fact should be fully recognised, and only so much done as can be well done. Under such circumstances the half is far better than the whole, and pupils must always be made to understand that it is not a certain quantity but a certain quality that will stand them in good stead when the time for marking or reporting comes.

The first and second grade examinations in freehand, model drawing, and geometry, held annually all over the country by the Science and Art Department, result in many thousands of candidates being presented each year for the testing process. The first grade examination is the most elementary, the second is of considerably higher standard, but yet well within the reach of schoolboys who have been properly instructed. Full directions as to the course to be adopted to enter the class for examination, the prizes offered, illustrations of the examples set, and all the needful information, may be seen in the Art Directory, a book that may be purchased by anyone for sixpence on application to Messrs. Chapman and Hall, the agents of the Department.

In the examination in first grade model-drawing the candidates have two simple models grouped together and placed before them. These are so selected as to test the power of drawing both curved and right-lined forms. In the second grade three or more objects are grouped together. The candidate is in each case required to draw them from the special point of view afforded by his seat in the examination room, but the models are so grouped that all the views are of about equal difficulty. Examples of groups set in a recent examination may be referred to here with profit, as it will enable any of our readers to see at once the scope of the examination. A cube was placed for the first grade examination on one of its faces, in such a way that none of its sides should be parallel to the desks at which the candidates were seated. A cylinder was then laid on the top face, and having its axis parallel to two sides of the cube. For the second grade examination a hexagonal prism leaning

against one angle of the cube was added. In another first grade group, the hexagonal prism lay on one of its sides in such a position that its axis was inclined to the row of candidates, and the sphere in the same set of models was placed in contact with it. For the second grade, a cylinder standing on end behind the prism, and bearing a vase, was added to the group. The objects given are not always these geometrical solids ; for instance, at the same examination another subject was a large flowerpot and saucer standing in the centre of a drawing board ; pot, saucer, and board all to be drawn, a gardener's trowel being placed beside the saucer for the second grade candidates. In another group a water-bucket on a board was the subject for the elementary examination, while for the more advanced grade a hatchet was leant against the bucket. Another arrangement was a table drawn on end, and a pickle jar laid down beside it, or a bath and towel-horse. It is needless to multiply examples, as these fully suffice to indicate the scope of the examination.

Model-drawing is ordinarily a popular subject, as there is an air of greater reality about it than in the preliminary free-hand course, and the two subjects may well be taken together in alternate lessons. Geometrical solids have a somewhat cold and forbidding look, and one may speedily find common objects that form equally good practice and awaken greater interest ; a tin canister is identical in form with the cylinder, and all that can be taught from the one can be as well demonstrated in the other. A triangular prism is an uninteresting-looking thing enough to the ordinary pupil, but if we open a big book and stand it, roof-like, on its edges, we have arrived at the same form in a way that carries much more sympathy. Those who are repelled by a sphere will draw a cricket ball with interest. It is a good plan to have a considerable number of such simple models, as we are thus able to form group after group, all equally enforcing any principle we may desire to bring before our pupils, without tiring them by repeatedly drawing the same object.

A simple group like a large book lying flat on the table, and having a mug or tea-cup on it, affords an excellent preliminary study, and as at this early stage it is more important that principles should be well mastered than any attempt made at producing a finished drawing, all shading should be kept in the background and held out as a possible reward in the future. Our own method is to place the group on a central table, the drawing desks being arranged in a hollow square around it. At the commencement each pupil sits where he pleases, and draws the group as he sees it from his point of view; but though all begin together, all do not finish together, and as each drawing passes muster, its owner drops into any available place, and has little or no option in his second view of the group. As a matter of fact a dozen good views might often be found of the object, but in practice, if each pupil draws two or three views it is sufficient, as nothing is gained by wearying him or her, and a new group or a new arrangement of the same one, even if it be only throwing the book open or turning the cup upside down, at once throws new life and interest into the work. As everyone has a different point of view, copying one's neighbour's work is of no avail and is instantly detected. Before the work begins at all, a careful examination of the principles involved should be given by aid of the black-board: even if this takes up the first half-hour, it is time by no means wasted; but any illustrative sketches of book or cup in their various positions should be carefully wiped off the board before drawing begins, or there is a strong risk that they will be simply copied by some one or more of the pupils. When a sufficient proficiency warrants it, shading in pencil or sepia may be permitted, but no drawing must at any time be shaded until the outline has satisfied the critical eye of the master. The shading introduced must not be of an arbitrary or fanciful character, but must in every way be an honest endeavour to represent the facts of the case. As our pupils advance, we presently admit the great attraction of

colour ; the groups become more elaborate, opportunities for remarks on composition present themselves, and the things selected are of interest—quaint Eastern pottery rich in form and colour, glass vessels of various kinds, shells and such like things, being the objects grouped together. Great care must be exercised to see that the pupils, to the best of their ability, represent what they really see ; they will, if not continually cautioned and watched, represent the facts as they know them to be, and not as they happen to appear to them. A rich brown book-cover, or a table-top, may, for example, when the light falls on their polished surfaces, look a pale lilac grey, but not one in ten will represent it so ; they know by experience the things to be dark brown, and dark brown they will make them. If, however, they can once be made to feel a real interest in the work, very good results may often be achieved; but here we have to deal with individual characters, and thoughtful pupils will produce thoughtful work, work which shows that brains as well as brushes have been wisely used, while careless indifferentism produces equally characteristic work in the other direction.

Where the length of the lesson, or the frequency of its recurrence, will permit it, it is often desirable to introduce into the group something to relieve the inanimate nature of the finest vases or other objects ordinarily available—a bright rosy apple, a golden orange, a brilliant tomato or a fine melon ; but where the lessons only last an hour and only occur weekly, the inevitable decay and shrivelling of such, or their change of colour, prevent their use.

When circumstances will allow, pupils should be encouraged to try a little out-door sketching. Where a class has an hour's drawing in the midst of other studies it is manifestly impossible to take them, as too much time would be consumed in the going and returning ; but a few of those who are most promising will often gladly join the master on a half-holiday, when the application of their model-drawing to some old cottage or other simple feature in the landscape

will greatly interest them, and convince them of the reality of their class work. The master may in such case either sketch himself, explaining the reasons for the various lines as he goes on to the boys who surround him, or he may perhaps still more advantageously give his attention wholly to his boys, and visit them in rotation and criticise in a kindly way their efforts. The master in such a case must be as little magistral as possible, remembering that his party have voluntarily given up their half-holiday to accompany him, and the more unconstrained master and pupils alike are, the more likely will they be to look forward with pleasure to the next sketching day. Where parties of this kind are for any reason not feasible, it is a good plan to excite individual effort and then ask to be allowed to see the result. These early and unaided attempts will often be decidedly crude, but a little judicious praise of any part that allows it, and a kindly pointing out of mistakes, and explanations of the proper procedure, are often gladly received and turned to profit. When the pupil has got to regard the master as his friend, desirous of doing all he can to help him, these informal chats are often most valuable. Not a week before we penned these lines an old pupil called on us with a folio of sketches he had made on Dartmoor, and it would probably be difficult to say which enjoyed the visit most, the old master or the old boy.

Exercise in representing on paper what the pupil actually sees before him will teach him immeasurably more than he could ever learn by continual imitation of other people's results; for there is the same kind, and almost the same degree, of difference between drawing from an object and following the lines of a copy, as between studying a language and transcribing phrases thereof with no enlightenment as to their meaning.

Drawing, so far at least as regards the power of representing common objects with facility, should be considered as indispensable a feature in a sound education as writing itself.

Some people will tell us that they do not want their children to become artists ; they might as reasonably object to their children learning writing, since they had no intention of their pursuing a literary career. 'Drawing,' to quote the excellent common-sense remarks of Redgrave, 'is a language, an intelligent mode of communicating thoughts and explaining things ; having, moreover, this advantage over other languages spoken or written, that it is universal, that it is almost alike intelligible to all the diverse races of mankind, needing no translation, but at once "known and read of all men." But there is another and an equally great advantage, which is, that whereas words, spoken or written, even in our mother tongue, often convey but a confused and imperfect idea of things, dealing necessarily rather with generalities than with minute specialities, and requiring long and elaborate descriptions where accuracy is required, drawing supplies us with a power whereby long descriptions and pages of writing are at once superseded, and thus it is a condensed shorthand as well as a universal language ; a shorthand moreover intelligible equally to him that writes and to him that would read it ; useful not merely to the scientific man for his diagrams and illustrations, but in the everyday relations of life. By its means the tradesman or the manufacturer instantly understands and comprehends the wants and wishes of the employer, and as readily conveys them to the workmen to execute.' This appreciation of the everyday value of a certain degree of art-power that is readily obtainable by almost anyone does not even yet find universal acceptance. Within a few weeks of our writing, a member of the Government, a man of great influence and education, in distributing the prizes gained at the Oxford and Cambridge examinations, stated that he should no more think of advocating that everyone should study mathematics than he should of advocating that everyone should be taught music or drawing. When the speech appeared in the newspapers considerable criticism was pro-

voked, but leaving the mathematicians and musicians to fight their own battle with the common foe, we need here only refer to the comments made by two men whose opinion as practical men far outweighs that of a theorist, no matter how eminent. Sir Henry Cole, after referring to the musical side of the question, writes : 'Then as to drawing it is next in use to writing, and even of more importance than writing in handicrafts. Mathematics rank next to arithmetic, but music and drawing, I protest, come into the very elements of education.' Mr. Nasmyth, the inventor of the steam hammer, a man of indomitable perseverance and exceptional skill, next writes as follows : 'Sixty years' experience with engineering works and with the mechanics and other classes of workmen engaged in such occupations, enables me to say that of all the useful acquirements beyond those of "the three R's," is that of drawing. By the term drawing I mean the art of representing the forms of natural or artificial objects by lines, which, when even rapidly sketched by a practised hand and educated eye, can bring an object before you with a distinctness and rapidity such as no oral or written description could accomplish. During a long and active life, engaged in occupations in which I have had daily occasion to communicate definite ideas to others in respect of forms and combinations of forms, the possession to a certain extent of the power of rapidly sketching such, in order to convey ideas of what I desired to communicate to others, has done me more real service than any other acquirement or faculty I may be in possession of. If we desire to produce really useful and effective men by means of our schools, let the pupils, by every opportunity, acquire this valuable art of hand-sketching. That is the kind of drawing which of all others will best serve the general affairs of life, and, without any attempt at producing artists as such, if our schools would confine their efforts in this direction to the *simple exercise of the* hand and eye, and thus enable the *pupils, with pencil* or chalk, to represent the object they

desire to bring before you, the possession of this power will be found to transcend in its general usefulness all "tongue acquirements," and do more to lead to success and enjoyment than any other attainment I know of. Nothing but a most earnest feeling of the practical importance of this subject would have caused me to venture to place it before your attention.'

Drawing gives the power of expressing things, while writing expresses ideas, and it will often happen that a precise knowledge of a thing can be better rendered by drawing it than by explaining it. Our readers may easily test this for themselves by studying first the description, then the illustration, of almost anything. How long a description would be necessary to convey clearly to another the look of the building in which they read these words, and with what facility the lines of the draughtsman bring it before the eye!

Though the first care of the beginner, and the last, must be only excellence, attained at any cost of time or labour, it is often a good plan when some little facility has been gained, to introduce now and then a little time-sketching. It gives interest and throws a little additional life into the work, especially where several are working from the same example, and a spirit of emulation is stirred. It compels thought, too, as, where time is limited, the salient points of the work must be first seized.

Another admirable modification of the ordinary course of work is the introduction occasionally of drawing from memory. Success in this will be one proof of some instruction in model-drawing, as in the course of this the student grasps principles and forms habits of observation which enable him to represent familiar objects in any point of view. Examination in memory-drawing forms an element in the comprehensive tests applied by the Science and Art Department, the candidate standing before the black-board and drawing any ordinary objects of household furniture or other *common objects* that the examiner may call for. We ordi-

narily mention to our own pupils, that on a certain date they will be required to draw some named object from memory, and during the intervening time they are free to examine and sketch it as freely as they like, though no notes or sketches may of course be consulted when the testing time arrives. Time-sketching may very conveniently be undertaken in from two to three hours, but half an hour is ordinarily long enough for the memory exercise. Where colour is used in the time-sketching a little longer time may be given than when the work is done with chalk or pencil, as the drying of the tints has to be allowed for; but on the other hand a surface can be much more readily covered, or a shade indicated in much less time, by the use of the brush than by the other means.

In drawing every stroke should have its meaning, and contribute in some way to the total result. Both time-drawing and memory-drawing are of advantage as counteracting a tendency that some pupils have for a merely mechanical elaboration, such as the excruciating working up of a background by small dots; work that almost anyone could do if they only gave sufficient time and patience, work that means nothing and teaches nothing, but labour that sadly eats away time that could be far more profitably applied. We trust we shall not be misunderstood as depreciating finish; no amount of elaboration that brings out the facts of the case more thoroughly can be other than praiseworthy, and the more thorough the work is the better; but all this adds living force to the work, while the mechanical precision we are objecting to is merely dead and formal, receiving the praise possibly of those whose praise is of no real value, but artistically worthless.

On this point Sir Charles Eastlake remarks: 'It is attributable no doubt to a praiseworthy motive on the part of the students to send in their works as complete as possible, but the completeness and the labour are sometimes not exactly in the right places. Sir David Wilkie was wont

to defend even the elaborate treatment of backgrounds. I quite remember his expression ; he used to say, "Never mind, it is all discipline ;" he thought that the mere habit of careful work, no matter how applied, was a certain discipline for the student. I mention his authority on that point, though I happen to differ from it ; I think that there may be labour thrown away.'

Where circumstances will allow of its being done, a collection of casts both of the human figure and of floral forms should constitute a portion of the fittings of the drawing class-room, and students should be encouraged to work from them. Their very presence is an advantage, for the most elementary pupils may derive some benefit from even looking at them, and looking forward to a time when they may attempt their representation. We were much struck by the remark made to us by a cabinet-maker who was doing some repairs in our class-room as he looked round at the grand head of Zeus, the frieze of the Parthenon, the noble Venus of Milo ; 'Ah, sir, what would I have given as a boy to have even worked at my trade in the same room with these !'[1]

Natural foliage, too, forms an admirable subject. The beginner should have a simple spray of some bold form like the laurel, but he must not be allowed to draw the leaves in a flat and diagrammatic way. The foreshortening will puzzle beginners tremendously at first, but a little timely explanation will soon help them on their way. The pieces to be drawn must be placed in bottles of water before them ; if the pupil is allowed to deal with them in his own way he will put them

[1] On reading over Mr. Cole's evidence before a Parliamentary Commission in 1864, to inquire into the working of the Schools of Art, we came across another interesting little example of appreciation. He said :

'I recollect examining the school at Carnarvon many years ago, and finding a man of the advanced age of sixty at work at an elementary drawing. I asked him why he came there, and he said he wished to learn ; he walked eight miles over the hills three times a week to learn elementary drawing, which he said was a comfort he had never obtained until the establishment of this school ; he was a farmer.'

on the paper beside him, and this at once gives them a flattened-out look which makes them easier to draw, but takes the life and beauty away entirely.

Casts are best not painted except the first time. After this, when they get dirty, a coat of whitewash toned slightly may be applied, and when it is again necessary to clean them this coat must be washed off before the next is applied. Constant painting clogs the casts and destroys delicate forms and markings. A light feather brush should be at hand to give them a gentle dusting with, as the dust of the room soon settles upon the more prominent parts. Failing this the beginner will be representing as shade what is really only a token of want of attention on the part of those who are responsible for the cleanliness of the room.

CHAPTER II.

Sir Joshua Reynolds on the object of study—Success only to be achieved by hard work—Genius—Dr. Hodgson and Sir Stafford Northcote on art teaching—Brunel on engineering drawing—The old system of teaching mechanical drawing and architectural work—Plane geometry—Careful reading of the problems essential—Examination blunders—The necessity of correct definitions—The oval and ellipse—Hand power and head knowledge each to be tested—First and second grade examinations in geometry of the Science and Art Department—Prizes—Drawing under the auspices of the School Board for London—Drawing in the Cambridge local examinations—Specimen model groups—Specimen geometrical and perspective examination papers for senior and junior candidates—Imitative colouring: examples of groups set—The examinations of the Royal Military College, Sandhurst—Freehand and geometry papers set—The entrance examinations of the Royal Military Academy, Woolwich—The course at the Military Academy itself—The Indian Civil Engineering College, Cooper's Hill—Examinations for draughtsmen in the Admiralty, the Indian Forests' Department, etc.—The technological examinations of City and Guilds of London Institute for the advancement of technical education—Solid geometry and orthographic projection—Drawing from machinery—Isometry—Architectural drawing—How construction should be taught—Drawing to scale—Styles of architecture—Class lectures and examinations—Perspective—Egyptian treatise on geometry—Priestley's 'Optics': on the origin of perspective—Good books on perspective and other drawing subjects—Art class-room should be well furnished with casts, models, and examples—Consulting and lending library of art text-books.

THOUGH the necessary limitations of our space, and the amount of ground we desire to travel over, prevent our pointing out any more directions in which the pupil may be exercised in freehand drawing in its widest sense, enough has, we trust, been said to demonstrate the principle upon which this branch and every other branch of artistic work should be studied. This may be perhaps briefly summed up as follows. An utter absence of *mechanical copying*, and an advance as quickly as possible

after the hand and the eye have been disciplined, to drawing from real objects and from nature; such work to be the *bonâ fide* work of the student, aided as far as need be by the instruction of the tutor, but in itself, whether good or bad, the result of the pupil's own endeavours. 'The great business of study is to form a mind adapted, and adequate, to all times and all occasions, to which all nature is then laid open, and which may be said to possess the key to her inexhaustible riches.'[1]

We are sometimes met by the reply that the pupil has no talent for drawing, but ordinarily this may be freely understood as meaning no inclination. Let such firmly resolve that the future shall show what an earnest determination may accomplish. Success in art, as in everything else, flows from downright hard work. There is undoubtedly in some a genius, a special gift, an inborn aptitude, that greatly smooths their way; but such a very moderate measure of success as would give a greatly increased happiness to the possessor is within the reach of almost all. We should have said all fearlessly, had we not remembered amidst the hundreds we have had under our instruction some three or four who seemed utterly unable to make progress; but the percentage is so slight that practically we may disregard it. Those who have not the heaven-sent gift may yet do very much by quiet steady perseverance. The evidence of Dr. Hodgson before the Schools Inquiry Commission is interesting and well worth quotation. 'I would have every boy if possible taught to draw as well as to write. A child may be observed to begin for itself at a very early age, and I would begin as soon as a child goes to school at all; as soon as it comes let it begin in its childish way to draw.' He was then asked if he would make this compulsory on all children, to which he replied, 'I would, except those individual cases where there was an absolute deficiency, but such cases are extremely *rare; for example,* allow me to say that in the Liverpool

[1] Sir Joshua Reynolds.

Institute, where we had nearly a thousand boys, every boy was taught drawing, and in the course of the eight years I was there I do not think there was an exception made in the case of ten boys altogether.' Dr. Hodgson was then asked if he attached any importance, when there was opportunity for such a thing, to sketching from nature? His reply was, 'Certainly, in a more advanced stage, I think it might be done on half-holidays with great advantage. The school teaching should be mainly from objects.'

The Archbishop of York at a meeting of the York School of Art observed that, 'to offer great facilities for the study of drawing to youths whose palms itch to handle the pencil, what was that but spreading their nets abroad in the wide sea of humanity, that the geniuses who might be swimming there might be caught? Drawing sharpened a child's faculties.' While Sir Stafford Northcote on another occasion said: 'Education in drawing conduces to make men certain and correct in what they do. It induces them to do that in the general education that writing does in the intellectual.'

The great Dr. Arnold once truly said that the difference between individuals was not so much in talent as in energy, while Sir Joshua Reynolds, believing more in study and in steady application than in inspiration, said, 'Excellence is never granted to man but as the reward of labour.' If in the foregoing extract we read boy for man it will be abundantly seen how the remark bears on the subject before us, for if a boy has great talents industry will improve and develop them, and if he has but moderate abilities this industry will go very far towards supplying the deficiency. Nothing is denied to well-directed effort; nothing is to be obtained without it. But the effort and the labour must be intelligent in their nature, and in this respect young pupils err grievously, for brains are at least as useful as pencils, and the eyes can never be used intelligently except the mind direct *them.* To see things mechanically, superficially,

ignorantly, is of little service compared to seeing with the understanding. 'Knowledge is power.'

The more technical drawing involved in the use of ruler and compass has great disciplinary value as a training in precision and exactness. It has moreover in many cases as great an intrinsic value as the freehand work in the future career, —one is, in fact, the companion study to the other, and neither can, without disadvantage, be omitted. 'Drawing,' said Brunel, one of our great engineers, 'is the A B C of the architect, engineer, and surveyor.' Technical drawing comprises many distinct branches, such as perspective, orthographic, and isometric projection, architectural and engineering work, the plotting of the land surveyor, &c., but to all these the necessary basis is a sound knowledge of geometry, a subject that now rightly forms a regular element in school instruction in the greater number of schools. In the old style of drawing we have seen the turbaned chieftain or the moonlighted ruin as the accepted type; but as almost every boy at some period in his career thinks he will be an engineer, the old borders had to be somewhat enlarged, and the would-be engineers were at once set to large and showy drawings of locomotive engines, which they copied with an added vulgarity and strength of colouring, and an entire ignorance of the meaning and functions of any of the parts, that made their labours of the most utterly futile nature. These, when mounted and framed, greatly pleased the ignorant parent, and a great career was prophesied for Tommy. 'Another special subject attempted in one or two schools is engineer drawing, but this is held in slight estimation by practical engineers, who assert that it is never properly learnt but in an office.'[1] Those who aspired to be architects were in like manner set down before an elaborate and gaudy elevation of a possibly impossible villa, radiant in brilliant green venetian blinds, showy verandahs, *exaggerated* weather-vanes, and the like, and this being

[1] Schools Inquiry Commission.

worked at, touched up, mounted and framed, gave unlimited satisfaction to the fond parents, and a niche in the Temple of Fame was at once assigned to our Johnny. How these subjects can really be advantageously taught we hope shortly to show, but in the mean time we return to a consideration of that which forms the basis of all mechanical drawing, a sound knowledge of geometry.

Geometry is divided into plane and solid—the one is an introduction to the other, but we propose to deal first with plane geometry alone. There are several good text-books on the subject, but none so suitable perhaps as 'Rawle's Practical Plane Geometry,' a book very largely used in schools of art, and containing all that is essential, erring neither in paucity nor overabundance, and very moderate in price. Any pupil who has gone carefully through this little manual will have gained a thorough knowledge of the subject for all practical purposes.

A Mr. Torr, a large farmer, who was examined by the Schools Inquiry Commission, replied as follows to the question, 'Do you think that drawing is of any use to boys?' 'I think as far as drawing goes, if you give a boy the rudiments of geometry merely, to raise a perpendicular, to make a diagram, and that sort of thing, you give his mind the start. I mean the power of representing anything that he had occasion to draw, the wheel of a cart, or implements, and as far as drawing a plan and the elevation of a building goes I think that is highly essential.' This witness was probably beyond his class, for he wanted farmers' sons taught good arithmetic, mathematics, geometry, and a decided knowledge of the elements of chemistry and Latin. An artist friend of ours was, however, sketching an old plough, as a piece of useful foreground material to introduce in some future picture, when the old farmer came up, and after looking on for awhile said, 'You mun measure it, or you'll never get it reet.' This power of getting things 'reet' is the very *essence of geometry*, and it is therefore most essential

to impress this on all beginners. A well-constructed geometrical figure is, in its way, a really beautiful thing, the beau-ideal of accuracy and rigid precision, but any approximation to this is at best an abomination. A steady hand, good eyes, good instruments, and a spirit of perseverance are all essential to success.

Beginners often fail from a want of comprehension of the question before them, not from any ambiguity in the question itself, but from downright carelessness; this of course is fatal to them in any examination. We once had occasion to examine the geometrical work of a large school, and one of the problems set was the following: Within the given square draw four equal semicircles, their diameters being adjacent and each arc touching one side of the given square. This would appear to be sufficiently clear, but besides the right answers we got the question answered in just twenty different wrong ways, some of them the most grotesque perversions imaginable. Some of these treated the semicircles as circles, others took diameter and diagonal to mean the same thing, others thought the touching a needless refinement, and so on. In self-defence we may be allowed to add that we had no hand in any way in the teaching, and never even saw the school, the papers being sent to us to look over.

We may be allowed to remark by the way, that the misplaced ingenuity which candidates in examinations often exhibit in explaining shortcomings might very advantageously be exchanged for measures that would prevent the necessity of apologies at all. Perhaps the most aggravating to the examiner is the fellow who writes on his paper, 'this problem cannot be done,' at once demonstrating the ignorance of the examiner and his own superior knowledge. Were he to add 'by me' all would be well, as the problem probably is one that has been satisfactorily worked some hundreds of times. *Such statements as* 'compasses broke' or 'not time to finish' *never do any real* good, and sometimes downright deception

further spoils their chance. We remember once a number of model drawings being sent to us to look over and mark; one of the objects was a spade, and one of the pupils, finding it rather difficult, wrote on his paper 'handle wanting by accident,' though of course all the other drawings showed that this was not so. If art be the moral teacher some would persuade us that it is, our friend had evidently not begun to experience to the full its beneficial effects.

The first thing naturally to be done is to acquire a good knowledge of the elementary figures, and, though instruction in orthography is no branch of the art-master's duties, we may say that a due care in such a matter as the spelling tells its own tale. We should hardly expect accuracy of working from those guilty of 'polligon,' 'sexdecagon,' 'sexigon,' 'sextagon,' or 'elipse.' A friend a while ago told us of a definition he once got for the circle: he was told that it was 'a straight line bent up at both ends until they meet in a point called the centre.' We have never ourselves come across anything quite so touching as this, but we have more than once in drilling pupils in the various kinds of polygons, seen the knowing look with which they have greeted the question, 'And how many sides has a nonagon?' The thing was regarded as a too obvious catch question, and they promptly answered 'none.' Beginners too must be carefully instructed in the well-known rule that compound words of classic derivation, or indeed any other, should not be a mixture of two languages. The names of the various kinds of polygon, for instance, are all Greek in composition, but many pupils, having a better knowledge possibly in many cases of Latin, will persist in using the Latin numerals and calling, for example, a fourteen-sided figure a quatuordecagon instead of a tetradecagon. The difference between an oval and an ellipse is another stumbling-block, and ninety-nine persons out of a hundred, when they mean the latter, call it by the former name. To test this we once put the question to a *large school, 'What* is the difference between an oval and an

ellipse?' and received amongst others the following replies: 'An oval is not so long as an ellipse.' 'An ellipse is half an oval.' 'Oval is egg-shaped, ellipse is really round but looks egg-shaped because of its position.' 'An oval is more round at the ends, as an ellipse is more drawn out.' 'An oval is a figure contained by one straight line, but not inclosing a point from which to the circumscribing straight line, every line drawn will be equal.' 'An ellipse has two distinctive angles, which are much more acute than those of an angle which are not perceivable.' 'An ellipse has sharp corners at the ends, an oval has rounded corners.' 'An oval and an ellipse are one and the same thing.' 'An oval is formed of two curves, but an ellipse is half a circle.' 'An oval is a figure in the shape of a lemon, that is to say, not quite round, whereas an ellipse is very nearly the same, but a good deal more round.' 'An ellipse never ends, it is like a comet's course.' 'An oval may be any curve, but an ellipse must be a curve between any two defined points.'

In our own teaching of the subject we recognise a distinction between what may be called hand-power and head-knowledge, and examine our pupils in a way that will test both, as it is necessary practically not only to know how to do a thing, but to be able actually to do it, to carry the work effectively through the preliminary stages to a satisfactory result; hand-power must be combined with head-knowledge. On the other hand the mere working out of a series of problems is of little service unless the *modus operandi* be stored up in the mind for future use.

The first grade geometry paper of the examinations of the Science and Art Department is taken up by many hundreds of small candidates every year. This stage is intended to teach elementary notions of practical geometry and the use of simple drawing instruments. The second grade paper is more advanced, and includes some knowledge of scales, geometrical pattern drawing, the construction of polygons, proportionals, reduction and enlargement of figures

and the like. A general idea of the form of such simple solids as the cube, prism, pyramid, cylinder, cone, and sphere should also be acquired by the candidate, as one or more questions in each paper deal with the delineation of plan, elevation, and section of these solids. As an added stimulus to success the Department bestows numerous prizes both for first and second grade work, such as boxes of water-colours, mathematical instruments, drawing-boards, books, &c.

The table of results printed on the following page, courteously sent to us by the Secretary for the School Board of London, of the results of the drawing examination held in their schools in 1879, is very significant of the spread of instruction in drawing as a school subject, while the totals of 'passes' and 'excellents' are most encouraging proofs of the diffusion of sound art knowledge; over 4,600 received prizes for excellence of work it will be seen, and it must be clearly borne in mind that these statistics are for the metropolis alone and take no cognisance of the similar work that is going on all over the country.

In August 1879 the following resolutions were passed, and notice of them forwarded by circular to all school-managers.

That an annual exhibition of drawings be held, during October, in each of the divisions, except those of the City and Westminster; these two divisions to exhibit with some other division.

That a selection be made from the drawings at each divisional exhibition for an exhibition to be held at the Offices of the Board during the month of November.

That each head teacher be required to send to the October exhibition drawings from every child who obtains 'Excellent' at the March examination, and that it be expected, as a rule, that drawings shall be sent from at least 10 per cent. of the children in average attendance at each school.

All pupil teachers who have passed in the second grade are allowed to exhibit.

Managers are particularly requested to see that the best drawings are selected, and that a proper number are forwarded

Division	Average attendance for the Quarters ended March 25th	Total number of papers applied for		Number of Children						Number of Pupil Teachers or Candidates							
				(a) Who have only given satisfactory evidence of having been taught	(b) Who have shown proficiency and passed in			(c) Who have passed, been marked 'Excellent,' and obtained a prize			(a) Who have passed				(b) Who have passed, been marked 'Excellent,' and obtained a prize			
		1st Grade	2nd Grade		Freehand	Geometry	Model	Freehand	Geometry	Model	Freehand	Geometry	Model	Perspective	Freehand	Geometry	Model	Perspective.
City. . .	198	155	12	43	14	—	—	—	—	—	—	—	—	—	—	—	—	—
Chelsea . .	7,811	8,110	563	3,046	643 *16	314 *23	144 *5	126 —	138 *4	39 *1	4	11	4	2	1	—	3	2
Finsbury .	14,998	15,060	637	6,110	1,571 *25	237 *1	309 *7	354 *2	161 —	75 *1	22	10	2	11	1	6	3	—
Greenwich .	8,973	10,006	562	3,814	1,069 *21	353 *2	273 *1	142 *3	232 —	63 —	17	11	—	2	1	4	2	—
Hackney .	16,621	19,015	670	7,018	1,462 *27	581 *11	326 *1	302 *4	326 *21	86 —	16	8	2	11	2	4	3	1
Lambeth .	23,284	24,021	1,203	9,868	3,280 *41	758 *13	500 *24	395 *5	263 *3	93 *6	34	25	4	23	4	8	5	4
Marylebone .	8,004	6,977	329	3,026	645 *13	175 *3	109 *6	140 *2	74 *1	24 —	12	12	—	—	3	—	—	—
Southwark .	12,018	10,729	530	3,660	1,262 *7	460 *13	245 *5	254 *1	290 *3	126 —	15	15	3	8	2	2	1	1
Twr. Hamlets	20,063	19,595	1,072	7,312	1,788 *39	622 *20	309 *6	241 *4	336 *12	167 *1	15	10	4	14	3	10	1	—
Westminster.	2,187	2,077	67	948	147 *1	33	20	15	16	—	2	1	1	1	3	—	—	—
	114,157	115,745	5,645	44,845	11,881 *190	3,533 *86	2,235 *55	1,969 *21	1,836 *44	673 *9	137	103	20	72	20	34	17	8
					Passes 17,980			Excellent 4,552			Passes 332				Excellent 79			

* Passes in 2nd Grade.

for exhibition. The drawings are to be selected from those executed since the previous October, and in each case the head teacher is required to guarantee that the exhibitor alone did the whole of the work.

Such an exhibition would doubtless have most valuable results, stirring up a spirit of emulation both amongst pupils and teachers. The School Board also issue the following general regulations as to the subject of instruction in drawing.

(*a*) In every department of a school there must be at least one teacher with a full drawing certificate. (*b*) Drawing must be taught in boys' and girls' schools, as an ordinary part of the school work. (*c*) Boys and girls are to be taught the undermentioned subjects: freehand, memory, model, perspective, and geometry. (*d*) Two hours a week in all boys' schools, and one and a half hours a week in all girls' schools must be devoted to drawing. (*e*) The children are to be taught drawing from the first standard. (*f*) Every school must submit its pupils to the examination by the Science and Art examiners, in March, and the results of the examination will be laid before the school management committee. (*g*) The Board Inspectors will report on drawing at their visits.

Some of our readers at this point may feel inclined to say that this model drawing, geometry, and so forth may be all very well for the children in Board Schools, but that it cannot have much practical value to the pupils in schools of higher grade. Here however we must at once join issue; such a principle of teaching drawing is the only sound one. Are the upper and middle class schools to be distinguished then from the lower by teaching a useless sham instead of giving a serviceable possession? We will now turn away from the drawing that is considered good enough for the child of a small shopkeeper or artisan, and see what we require if we would pass the excellent 'local' examinations of Oxford or Cambridge; if we would hold Her Majesty's commission *in the Artillery,* the Engineers, or the Line, or pass into the

Indian Civil Engineering College at Cooper's Hill, as a preliminary to high and responsible office in our great Eastern possession. Oxford calls on our young ladies for no head of Minerva 'done' in chalks, the Indian officials call for no turbaned chieftain, and the army does not feel the need of them either. What they do require can be in no way better shown than by turning to the papers they set their candidates. The nearest approach to Minerva or the chieftain is seen in the copies that are sometimes required to be made from drawings by the great masters; but these examples are immeasurably superior, and the work is done in the examination room and is *bonâ fide* the production of the candidate, no touching-up process by the master being possible. In the army examinations, too, a little facsimile work in pen and ink from old engravings is called for, but it will be readily seen that this too offers no opening to pretentious sham, while all the other items are a sufficient guarantee that the instruction has been sound.

Candidates for the Cambridge [1] local examinations may offer themselves either in section 1, geometrical drawing and linear perspective, or in section 2, drawing from the flat and from models. Students examined in either section will be required to satisfy the examiners in both the subjects comprised in that section. Last year examinations were held in ninety-five centres for boys and eighty-four for girls, and each year shows a great increase in the numbers of each coming up for examination. No one over fifteen, we may mention in passing, is a junior, no one over eighteen is allowed to go in for the senior. In 1879, out of 3,404 junior candidates, 315 boys went in for geometry and perspective and 1,056 for flat and model drawing, while 31 girls went in for the first of these sections and 636 for the second. Under the head of flat drawing a piece of symmetrical foliation had to be copied in an hour by the juniors, the dimensions being

[1] *The Oxford examinations are very similar—to refer to one university will be sufficient.*

altered from those of the example, while the seniors had an hour and a half allowed them to copy a portion of a drawing either by Raffaelle or by Michael Angelo, the originals of the old masters being facsimiled for their service by the aid of photography. The junior model-drawing had an hour assigned to it: the students were required either to draw a group of cups and saucers and a tea-caddy, or else a water-bottle and a glass, while for the benefit of the seniors, an hour only being allowed them, a lamp was added to the first group and some books to the second.

In geometrical drawing about six questions are given and an hour's time allowed.

The following half-dozen questions will show the character of the paper set.

1. Take any two points, A and B, one inch apart; through these points draw lines at right angles to each other.

2. Draw a right line, A B, two inches long, and divide it successively into $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, and $\frac{1}{8}$.

3. Construct a rhombus having sides of $1\frac{1}{2}$ inches and two angles of 60 degrees.

4. About a circle of 2 inches diameter describe a regular pentagon.

5. Give geometrically a mean proportional between lines of $1\frac{1}{2}$ and $2\frac{1}{4}$ inches respectively.

6. Within a square of 2 inch sides place a quatrefoil of semicircles having their diameters adjacent, and of which each shall touch two sides of the square.

Both juniors and seniors are only allowed one hour for perspective. The following three questions form one of the papers set for juniors.

1. Put into perspective a square slab of 5 inch sides and 1 inch thickness, lying on the ground plane, its sides inclined right and left at 45° to the picture plane. Let the nearest corner of the slab be 2 inches within the picture and 3 inches on the left of the spectator.

2. *On this* slab place upright a right cone 6 inches high

and 5 inches in diameter. Let the centre of the base of the cone coincide with the centre of the upper face of the slab.

3. Find a point A on the ground plane 30 feet within the picture and directly in front of the spectator.

These problems are all to be worked to a scale of half an inch to the foot, the distance of the spectator from the picture being in each case twelve feet, and the horizon five feet above the ground plane.

The senior papers represent a very good hour's work. The following is a specimen.

Linear perspective.—These problems are to be worked to a scale of half an inch to one foot, the distance of the spectator from the picture being in each case ten feet, and the horizon four feet six inches above the ground plane. 1. At a point on the ground plane two feet on the left of the spectator and ten feet within the picture, draw a vertical line ten feet long. 2. Let this line represent a corner of a rectangular room, the walls of which are inclined to the picture at 50° and 40° to the right and left respectively. 3. On the right-hand wall, five feet from the corner of the room and four feet from the floor, hang a drawing four feet high and three feet wide. 4. On the left-hand wall, three feet from the corner of the room and four feet from the floor, hang a drawing five feet wide and three feet high. 5. Part of the pattern of the carpet is a circle four feet in diameter. The centre of one of these circles is five feet from each of the two walls. Put it into perspective. 6. Wherever you please sketch a figure four feet six inches high standing in the room.

In addition to the foregoing subjects any senior candidate who has satisfied the examiners in drawing from the flat, and in one at least of the other divisions, may take up the subject of 'imitative colouring,' equivalent to the model-drawing in colours that we have advocated in the preceding chapter. Each drawing must be not less than eight inches in its longest dimension, and between two and three hours, according to the demands made on the time by the other subjects, can be allowed for it. On one occasion a common red brick was placed on a white napkin, and hanging forward across it towards the candidate was placed a small branch of

some evergreen plant. These were the general directions issued, the particular plant would of course vary: in some localities laurel would come most readily to hand, in others ivy, and so forth. In another case the person conducting the examination is required to 'place before the candidate on a white table-cloth or napkin a head of celery, the root end rather towards the candidate. The light should be such as to give well-defined shadows, some of which should be visible to the candidate.'

The examinations for admission to the Royal Military College, Sandhurst, include drawing. They are divided into preliminary and final. In the preliminary no marks are assigned to any subject but geometry. Should the candidate pass this satisfactorily he passes next to the final, which amongst other subjects includes mathematics, with a maximum of 3,000 marks, English composition, history, and literature (3,000), German (2,000), and freehand drawing (1,000). University candidates who have passed certain examinations at their respective Universities, such as 'moderations,' 'the previous examination' &c., are excused from the preliminary except in the case of the geometrical drawing: this is obligatory on all candidates. The geometry paper has two hours or two and a half assigned to it, and the freehand three hours. In a recent examination, out of 357 who were up, 215 went in for freehand, a voluntary subject. Out of the twelve University candidates then up, one got 537 marks out of the possible 1,000, another 83, and another 34. Three others came out in the list with a 0 to their names and the remaining six did not venture on it, whence we may calculate that the Universities scarcely yet furnish an atmosphere adapted to art culture. Each candidate brings his own drawing pencils and brushes, but drawing-paper, colours, drawing-boards, Indian ink, and palettes, are provided. When he goes in for the geometry all he requires to take with him are his instruments, all else being supplied.

In the freehand drawing paper the drawing must be

entirely freehand: no instrument or mechanical aid of any kind is allowed. The following are specimens of the sort of questions that will confront the candidate. A drawing of a cube in perspective having a hexagon on one face is handed over to the examined and he is required to transfer it correctly to the other visible face; or a model is placed before him and he has to make a pencil drawing in light and shade of it. A note on the paper states, 'In making drawings from models or any kind of solids you will have necessarily to deal with cross-lights; all such objects must be drawn just as they happen to be lighted.' A third question will require him to copy in pen and ink in as accurate facsimile as possible a small portion of a Durer woodcut, and he is warned that though he may use a pencil to make a slight sketch as a guide, that a pencil drawing merely inked over is not at all what is required. A fourth question will require the candidate to make as complete a representation as he possibly can of the object set before him (we have known a spray of oak foliage, a shell, a bunch of acorns, a fir-cone, and other similar objects chosen for this purpose by the examiner). This drawing at the option of the candidate may be either in sepia, pen, or pencil, but he is warned that a finished drawing, and not a mere sketch, is what is required. If therefore he has not time to finish the whole, he is advised to finish a portion as completely as possible.

The following is a fair specimen of a Sandhurst examination paper in geometrical drawing. It is headed by the following note: 'Not more than six questions are to be answered. The figures should be neatly drawn in clean fine pencil-lines, and, if time allows, they should be inked in either with common or Indian ink. The solutions must be strictly geometrical, and particular care should be taken to show all the necessary lines of construction.' The eight questions of the paper are as follows.

1. *The distance* between two towns is 37 miles, and measures *on a map 1·5 inches.* Construct a scale to suit the map, showing

100 miles, by which distances of 5 miles may be measured. Show single miles by the diagonal method.

2. Draw a straight line 5·5 inches long and divide it by construction into 13 equal parts. Through the points of division draw alternately fine and thick lines, 4 inches long, making an angle of 45° with the original line, and projecting equally on either side of it.

3. Describe a circle of 1·75 inches radius, and inscribe in it a regular octagon.

4. Describe a circle of 1·6 inches radius, and divide it by construction into four sectors containing respectively angles of 45°, 60°, 120°, and 135° at the centre.

5. A map is drawn to a scale of 4 inches to a mile. Construct a comparative scale of paces by which distances of 100 paces may be measured. Show 2,000 paces. (A pace = 30 inches.)

6. Draw a plan to a scale of 100 yards to an inch of an irregular five-sided field, ABCDE, from the following measurements:

Sides { AB = 200 yards. BC = 120 „ CD = 150 „ DE = 90 „ EA = 170 „ } Diagonals { AC = 250 yards. DA = 230 „ }

7. Describe an equilateral triangle of 1·5 inches side. About the triangle describe a circle, and about the circle describe a square.

8. Construct a square of 2·5 inches side, and in it inscribe an isosceles triangle having its base equal to 1·75 inches and its apex in one of the corners of the square.

The preliminary and final examinations that have to be passed by those desirous of admission to the Royal Military Academy, Woolwich, are very similar in general character to those for Sandhurst, but they are of an increased degree of difficulty. The geometrical work is compulsory, the freehand optional, and the examination for each subject lasts three hours. Out of 79 who went up in a recent examination, 53 took up freehand, on the principle probably in some

cases that 'there's no harm in trying.' Sixteen of these do not reach the minimum that is allowed to reckon, 85 other candidates who presented themselves for examination failed to pass the preliminary papers. The course of instruction at the Academy itself is divided into obligatory and optional. The obligatory subjects include field and permanent fortification, with the requisite amount of geometrical drawing, and military drawing with field sketching and reconnaissance. Its importance in the eyes of the authorities may be recognised from the fact that while 6 is assigned as its mark, military history is 3, French or German 2, drill $3\frac{1}{2}$, chemistry 2, while fortification and mathematics alone overtop it and have 7 each. In the optional work we find freehand and landscape drawing with 2 marks, Italian, Russian, Spanish or Hindustani, each 2, higher chemistry 2, higher fortification 3, and higher mathematics 5, so here again it holds its place well. As all marks gained in optional subjects are added to those gained in compulsory subjects, the cadets have every inducement, as the totals finally place them and influence the commissions they receive. The staff includes a professor of fortification at a salary of 450*l.* per annum, and of geometry at a like stipend, a professor of military drawing who receives 550*l.*, and a professor of landscape drawing having a salary of 350*l.*

The Royal Indian Civil Engineering College at Cooper's Hill trains its students for posts in the Indian Public Works Department. The entrance examination has lately undergone some modifications; it included and possibly still includes freehand and geometrical drawing, but neither were compulsory, though any marks gained in them counted to the candidate's credit. Only English (750 marks) and mathematics (2,500) were compulsory. The examination was a very severe one. The freehand, for example, lasted from 10 till 5, with an hour's rest between 2 and 3—six hours of downright work; *while three papers*, each three hours' work, were set in the *mechanical section*, one dealing with plane and solid geo-

metry, the second with perspective, and the third with isometrical drawing—a total of fifteen hours' work in drawing alone. It is curious that though the students ultimately go out as engineers to India, the highest marks after mathematics were awarded to Latin and Greek, each of which was valued at 1,000, French and German each take 750, chemistry, geology, geography, and electricity each 700, while the two drawing subjects each had 500 marks assigned to them. Hence it would appear that a knowledge of Greek is just twice as valuable to a man constructing a bridge or a railway as the power of making working drawings of its structure.

As the preparation of candidates for these different examinations is a feature in the work of some of our public schools, Cheltenham bestowing the greatest attention to it, these details of the work to be prepared are not inopportune.

Should our pupil desire to get a post as draughtsman at the Admiralty, besides a preliminary examination in general knowledge, he must pass in practical geometry, the drawing and design of architectural works, perspective, architectural water-colour drawing, &c., &c. Even an accountant clerk in the department of the director of engineering and architectural works in the Admiralty has to pass a compulsory examination in architectural and engineering drawing, so far as may be necessary to enable him to read plans and comprehend their details.

In the Indian Forests Department the examination includes freehand drawing, plan-drawing, and the use of mathematical instruments, while the candidate for a post in the Surveyor-General of Prisons Department must understand not only the theory of engineering and architectural construction, but have the power of making all necessary drawings.

Assistant geologists in the Science and Art Department must pass an examination in drawing, a piece of geological section being given them to copy; they must also under-

stand the use of common drawing instruments, while the clerk of the works in the Public Works Office must show a knowledge of geometry and freehand, and his furniture clerks must be competent to make sketches showing the design and construction of all articles of furniture, as bookcases, presses, and all kinds of fittings. In the most varied posts we see the use of the pencil thus constantly reappearing.

In the case of the draughtsmen in the Hydrographical Department we find a demand again for geometry, while the plan drawing is topographical in its nature, and a demand is made at the examination for a knowledge of perspective, and the proofs of fair practical proficiency in the use of pencil, pen, and brush. We might in the same way refer to many other Government posts, as county surveyorships, clerkships in the Patent Office, &c., all calling for a knowledge of practical drawing, but we have, we trust, given sufficient evidence of its great importance.

If we turn to the excellent technological examinations conducted under the auspices of the City and Guilds of London Institute for the advancement of technical education, here again we are confronted by the necessity of a knowledge of using the pencil. Besides the special technicalities of each subject, such as alkali manufacture, brewing, calico-bleaching, dyeing, and printing, cloth manufacture, gas, glass, iron, lace, paper, pottery, silk, we find that the examination in each of those named requires a knowledge of machine drawing, while mine-surveying includes a knowledge of practical plane and solid geometry.

The principles of solid geometry and orthographic projection are best taught to boys when small models of the objects to be projected are accessible. These are only really necessary at the beginning of the teaching, though in all stages an occasional reference to them might at times be *a help. As the* earliest forms are of very simple character *they can easily be* procured; we have many a time, for ex-

ample, cleared up difficulties in the projection of the cylinder by cutting an inch off a pencil and then placing the piece at the various suggested angles, making sections, &c., and we have before now called in the aid of modelling clay, and even raw potato, the first being moulded and the second cut into the illustrative forms required. In the same way the hinge line of the instrument-box marks clearly the line dividing the vertical from the horizontal plane. When the box lid is thrown back until it is in the same line as the body of the box we see the conventional relation of the two planes to each other on our drawing paper, and when the lid is tilted to an angle of 90° we get the true relation. Hence with merely the box of instruments, and pencil or india-rubber of the pupil, we can in a short time give him a very considerable insight into the principles governing the work he is called on to perform. As he goes on the simpler forms are exchanged for details of machinery, drums or ratchet wheels, and the like, until he presently finds himself able, either from data given or actual measurement, to represent a machine either in plan or elevation, no matter what angle it may make with either plane. At South Kensington and some other art schools the students have the opportunity of drawing from actual machinery, an immense advantage where it is at all practicable. There are several books on the subject, but none better for the use of the ordinary student than Binn's 'Orthographic Projection.' It is in two volumes, and, beginning at the very commencement, passes on through all the necessary stages, and only leaves the student when all that is necessary for him to know has been lucidly brought home to him.

Isometrical drawing is sometimes of service, but its principles are so easy in application that any ordinary pupil will pick them up and speedily apply them without difficulty.

Architectural work should be taught in a comprehensive way, and not simply result in a showy drawing or two of a house of the real construction of which the pupil is utterly

ignorant. Where it is at all practicable master and pupils should visit a building in course of construction, and, after the master has explained by rough sketches the mysteries of bonding, the construction of floors, partitions, and roofs, the various kinds of staircase, and such-like details of the building, the pupils have the facts borne irresistibly home by actual inspection of the very things, no longer lines on a black-board but translated into the verities of brick or deal.

All architectural drawing should be done to scale, and where the master has reason to believe that a pupil is blindly copying from some drawing put before him, he may very advantageously require the scale to be altered from the original. Boys may possibly resist the drudgery of making drawings of various details, and their parents, if ignorant on the point (and a man may of course occupy a good position in society and yet be very ignorant on points that lie outside his experience), may think that a few drawings of staircases or roof-trusses are a very inadequate return for the time and money involved. This want of confidence is often a great difficulty, and a master frequently has to do the best he can for a pupil in spite of the pupil himself or the opposition of his relatives.

The pupil should learn not only the constructive details of a house, but should receive from his master sound instruction in the various architectural styles, the Gothic, Renaissance, and others, having good examples of the various periods indicated to him. Even the parish church will often give abundant scope, not only in its beauties but in its shortcomings, for a very comprehensive lecture. We have sometimes ourselves suspended work for half an hour, in order that we might explain at the black-board the various styles of mediæval architecture or some cognate subject. Some sticklers for the letter might declare that this was not teaching drawing at all, but we conceive it to be well within the spirit of our duties. It is every way undesirable for one's pupils to labour under the false idea that it is quite sufficient

if they give themselves up merely to the actual practice of painting or drawing. There is a cultivation of the mind as well as of the hand, and a true art-training takes cognisance of both. The mere representation of forms, lights and shades, is but the alphabet of art, the elements of a living power that should be found appealing to heart and mind as well as to the eyes. The true artist sees not merely the material body but the living spirit; and no mere laying of bricks, no mechanical chipping of the marble, no cunning admixture of the pigments, constitute the real labour of the architect, the sculptor, or the painter. It is sufficiently evident that those who would embody a living spirit in their work must themselves have felt its vital force: *Ex nihilo nihil fit.* Hence we enter the domain of the imagination, of the intellectual, the moral and the poetic, for true art appeals to more than to the eye. Art then demands an intellectual culture and a storing of the mind, and this involves the superaddition of reading and study to the manual dexterity.

The little sketch of a syllabus for our last class lecture lies before us—it is as follows. 'Wood-drawings; what wood is used and where it comes from; how to prepare the block for drawing on, the pencils used, screwing up of blocks, tints or lines on the wood. Necessity for energy and rapidity in newspaper work; reversing the drawing, breaking up block for the engravers, the process of engraving, printing off the illustrations with the text. Engraving on steel or copper, no india-rubber, trying work to the eyes; the process of engraving; hand-printing; artists' proofs; breaking up plate after a limited number of impressions. Etching; preparation of the plate, biting-in with acid, printing off, India paper. Lithography; where the stones come from, necessity of stowage in case of a demand for a new edition, care not to touch the stone with the hands, how the chalk is prepared, sponging the stone and printing off. Colour-printing; its expense, drawing on different stones and distinct printings; *relative cost of* various methods.' Such a talk will last an

hour probably, and, if illustrated by examples bearing on the subject, will keep the pupils not only attentive but interested. An occasional question to anyone in the audience keeps them further on the *qui vive*, and a week or more afterwards, promiscuous inquiries during the working hours will enable one to see how much is retained, where accidental ambiguities can be cleared up, and the like.

We may here too add an examination paper we recently set to one of our classes, as it further illustrates our desire to make the work thoughtful.

1. Make a rough sketch of a square block of wood, as you think it would appear, when (*a*) your eye is level with the top of it, (*b*) level with the bottom of it, (*c*) immediately opposite one angle, and (*d*) immediately opposite one face. 2. What is the difference between a trapezium and a trapezoid? 3. What is the special name for a polygon of sixteen sides? 4. If you had a colour box for twelve colours, which should you select as most generally useful? 5. Explain how you would lay a flat wash of colour, and how you get a graduated tint. 6. Draw from memory a group of not less than four objects. 7. What is a set square, and how do you use it? 8. Mention any colours that have (*a*) an animal origin, (*b*) a vegetable, or (*c*) a mineral origin. 9. What is the difference in process between an etching and a wood engraving? 10. Make a careful sketch from memory of two flower-pots, one standing up and the other on its side. 11. Show how you would place a ring of nine equal circles in a circle, each touching its neighbours and all touching the large circle. 12. Put down the name of every water-colour you remember, classing the yellows, reds, &c. together.

'Many have been deterred from attempting to learn drawing from the dread of encountering so formidable a department of the art as perspective; whereas, if it is stripped of its geometrical and mathematical intricacies, it will be found a very simple matter, and easy of comprehension.' Thus writes Burnet in his essay on the education of the eye, and we trust that many of our readers who have had occasion to

study the subject will have found out the truth of his words. Some pupils grasp the principles involved much more readily than others, but to the persevering it offers no real difficulty, and when the clue is once gained all obstacles vanish before a determined attack. When the problem is a somewhat complicated one the subject becomes a difficult one to deal with satisfactorily in a lesson an hour long. When the pupil is in the heart of his work he knows where he really is and what further steps have to be taken in any direction, but if this has to be put away until that day week the mazy network of lines is a great bewilderment, and some little time must be spent in getting again at the clue to it all. The glow of interest has had time to grow cold, and the resumption of the work after a considerable interval is much more difficult than its continuance at one sitting would have been. All kinds of mathematical work are much more easy to some pupils than to others, so that in all our classes where instrumental drawing alternates weekly with freehand from the flat or the round some members are jubilant and others depressed, for the revolution of time has brought round to one set the subject at which they can always do well and gain credit; while the weakness in it of the others means a paucity of marks. The selfsame pupil may often in a report be accredited with two very different verdicts, as for instance 'freehand poor, perspective very good,' or 'geometry excellent, model-drawing unsatisfactory.'

Amongst the papyri in the British Museum may be seen a treatise on geometry. Perspective can boast of no such antiquity, and many nations having considerable art-power, as the Chinese or the still more gifted Japanese, seem to have little or no notion of it. The following passage from Priestley's 'Optics' will be read with interest. 'It was in the sixteenth century that perspective, a new branch of optics, was revived, or rather re-invented; this is more a business of geometry than optics, and is indeed more an art than a science; but *since it is derived* from optical principles, and as the use of

it is to give pleasure to the eye by a just representation of natural objects, I would do wrong not to give a short account of its rise and progress. We learn from Vitruvius that Agatharchus, instructed by Eschylus, was the first who wrote on the subject, and that afterwards the principles of this art were more distinctly taught by Democritus and Anaxagoras, the disciples of Agatharchus. Of the theory of this art, as described by them, we know nothing, since none of their writings have escaped the general wreck that was made of ancient literature in the dark ages of Europe. However, the revival of painting in Italy was accompanied with a revival of this art. The first person who attempted to lay down the rules of perspective was Pietro del Borgo, an Italian. He supposed objects to be placed beyond a transparent tablet, and endeavoured to trace the images which rays of light emitted from them would make upon it, but we do not know what success he had in this attempt, because the book which he wrote upon the subject is not now extant. It is, however very much commended by the famous Egnazio Dante, and upon the principles of Borgo Albert Durer constructed a machine by which he could trace the perspective appearances of objects. Balthazar Perussi studied the writings of Borgo and endeavoured to make them more intelligible ; to him we owe the discovery of points of distance to which all lines that make an angle of 45° with the ground line are drawn. A little time after, Guido Ubaldi, another Italian, found that all lines that are parallel to one another, if they be inclined to the ground line, converge to some point in the horizontal line, and that through this point also a line drawn from the eye parallel to them will pass. These principles put together enabled him to make out a pretty complete theory of perspective.'

Perspective is one of the subjects of the second grade examination of the Science and Art Department. Candidates are required to show a sound knowledge of the use of vanishing and measuring points used in horizontal planes,

and to represent simple solids or objects on the ground plane in any position. One hour is allowed in these examinations for model-drawing and geometry, and the free-hand and the perspective each have an hour and a half assigned to them. Burchett's practical perspective is a good book for school purposes. Brook-Taylor's, Kirby's or Dennis's treatises on the subject are more advanced in character, giving the master much valuable knowledge, but carrying the subject considerably further than will ordinarily be found either necessary or possible where perspective forms only one item amongst the numerous subjects of a boy's general education.

We conclude our present chapter by referring to the various available text-books. There are of course a great many of these, and it is needless to refer to more than one or two of each. Where any book is left out which our readers may have expected to find, it will either be because we have not ourselves seen the book, or because others of the same kind appear to us to be better. The freehand copies generally found in schools of art are those of Dyce or Poynter, the Academicians. The progression in both of them does not appear to be sufficiently marked, and many of them would probably be discarded were it not for the prestige of the names they bear. Albertolli's foliage is very good, but advanced in character, and many of the other sets of copies now published for use in schools of art, Board schools and so on, are too small for their purpose. We felt the difficulties ourselves so strongly that we have for some time used a set of our own preparation—these, being published under the title of the Marlborough Freehand Drawing Course, are purchasable by anyone. They have been adopted in several art schools in England, and throughout the art schools of Victoria. For geometry Rawle's and Burchett's books are the best; the second is five times the price of the other. The two books of Binns on orthographic *projection we have* already referred to. The most com-

prehensive book on isometrical drawing is that of Sopwith; it has long since ceased to be published, but it can occasionally be picked up amongst the stores of the dealers in second-hand books. Laxton's examples of building construction are very useful, and so too are those of Busbridge. Busbridge too has published an equally excellent set of drawings of machine construction, though they fail somewhat in so many of them being of an equal degree of difficulty. The models supplied by the agent of the Science and Art Department are strong and good, but, as we have already indicated, the occasion for their use is not great, as many common objects furnish equally good practice at a much less cost. A carpenter at once made us from our rough sketches a set of solids, a cube, triangular prism, &c., at a very inexpensive rate.

A visit to the nearest school of art will enable anyone desirous of getting a set of casts to see what is most useful for his purpose, and consultation of the Art Directory, already more than once referred to, will give the name of the agent who supplies them, the price of each cast, and suggestions as to those that may most advantageously be selected for use in various grades of art schools. The simplest collection comprises nine casts, giving examples of Greek, Roman, and Renaissance ornament, and two busts from the antique. This set costs a few shillings more than three pounds, but such sets are merely recommendations, and single casts are readily purchasable at prices that range from sixpence to ten pounds each.

A good superstructure can only be reared on a good foundation, and it is a very poor economy to make as little as possible do. The art class-room should be well furnished with all needful appliances, or our pupils will grow up starvelings; but no matter how extensive the apparatus or the painstaking character of the teaching, we come at last to the fact that cannot be too closely pressed home on the pupil, that the outcome of it all rests almost entirely on

himself. Perseverance and industry thrive amidst poor surroundings, while idleness starves the artistic faculty in the midst of a perfect wealth of material for study.

A really good art class-room should include a book-shelf or two, not only for the storage of books of reference but for others of a somewhat more artistic character. We always keep some few books ourselves for the use of our pupils, and find them much appreciated. A few nights before writing this a private pupil of ours went off rejoicing with a large book on plants and Owen Jones' 'Grammar of Ornament.' He was studying design, and such books would be of immense service to him, though he might look in vain for them in any ordinary library. Some of our artists' colourmen publish little manuals on art that are very inexpensive and give a good deal of useful information, many of the writers being professional artists or teachers. A reference to the catalogues of Messrs. Cassell, or Crosby Lockwood & Co., or, in fact, almost any other publishers, will give the titles of many useful art-books, such as Gullick and Timbs's handbook—an altogether excellent book, Leitch's course of sepia-painting, and many others. It would be a tedious and thankless task to draw up a table of some fifty book-titles, but it is none the less desirable to have the fifty books, and to lend them freely. Deliberate or reckless maltreatment should of course be sternly checked, but the occasional expense of renewal necessary on legitimate wear and tear may well be overlooked in view of the great indirect gain that such small consulting library will prove.

CHAPTER III.

The Kindergarten system of teaching drawing—The five groups—The gifts—Solids—Planes—Plaiting and folding paper—Lines bounding planes—Squared slates and papers—Points—Pricking—Colouring and modelling—The system defective artistically—Drawing in Parochial, National, and Board Schools—Their annual examination—The stimulus of prizes, payments and grants—Teaching in middle-class schools—The South Kensington system—Illustrious Kensington students—Percentage of schools teaching drawing—Early recognition of drawing in King Edward VI.'s School, Birmingham—Considerable variation of practice in private schools—Governesses' certificates in drawing—The examinations of the College of Preceptors—Percentage of drawing candidates—Teachers' diplomas—Examples of freehand, model-drawing, geometry, mechanical and perspective papers—Groups for colour-work.

HAVING, in a very general and hasty way, indicated the kind of teaching that will prove most serviceable to the average boy or girl, we now proceed to see how far the general arrangements of our schools aid their pupils in acquiring this useful knowledge. After this we then propose to see what career is open to those who would desire to carry their beginning of art-power to a higher point. We shall then refer to such institutions as the Government schools of art, schools of engineering, the teaching arrangements of the Royal Academy, and the various other valuable opportunities of gaining increased art-instruction now open to our pupils.

As the Kindergarten, an institution of German origin, has been transplanted to our shores and taken some considerable hold, receiving, for example, the official recognition of the London School Board, and having a Kindergarten College in the metropolis for the training of its teachers and *the advancement of* its views, we may fitly introduce in our *chapter a slight* sketch of its influence on our special subject,

the teaching of drawing. As children enter the Kindergarten frequently when they are but four years of age, the elementary work has necessarily to be of the most simple description. Something that shall be of living interest to the children is taken, and abundantly illustrated by anecdote, comparison, and experiment. Simple pictures that bear upon it are produced and discussed by teacher and children. The pupils are then invited themselves to aid in its illustration by means of the 'occupations' that are so conspicuous a feature in the system. Supposing, for instance, the talk of the teacher to her small audience had been about the rabbit, at its conclusion a rabbit-hutch would be built out of the small wooden blocks furnished. Stick-laying is another feature. The bricks give bulk and solidity, while the representation of a rabbit-hutch by laying sticks on the table is an exercise on the flat surface. The more advanced children would endeavour to model a rabbit; 'pricking,' another characteristic feature, would be resorted to by others, while the 'drawing' is done by furnishing the children with a rabbit cut out in stiff cardboard. This they place on their slates or paper and run a pencil round it to get the outline; they then fill in the details—eyes, ears, and a suggestion of the texture of the fur, from looking at the picture before them. All is illustrative of the central idea. The first thing to do is not so much to talk about the things as to be busy with them. It is not the dry anatomy of nature's facts, but the personal relation in which the child finds itself to certain objects that first awakens its interest.

The 'occupations' are divided, according to the ideas involved, into five groups. I. Solids; II. Planes; III. Lines; IV. Points; V. Shapeless materials. This last appears a somewhat weak and shapeless way of expressing the matter. It is the highest and last class, and comprehends painting and modelling.

The first group, that of the solids, is divided into six 'gifts' for the children. The first consists of a box contain-

ing six balls—red, yellow, blue, orange, green, and violet in colour, respectively. We need not particularise each gift, suffice it to say that each is progressive. In one a cube is divided twice in each direction, forming twenty-seven small cubes, three of which are divided again into halves and three into quarters. Other cubes are subdivided into oblongs as long again as they are broad, while others again are cut into slabs of varying thickness. It will readily be seen that many useful lessons may be taught from these simple elements, and that the young student, if not engaged actually in drawing, is at least getting a good notion of form. Each step in the course is a logical sequence from the preceding, and not merely an arbitrary or accidental stringing together of toys. One occupation develops from another, and these progressive lessons and exercises pave the way for the study in the future of geometry and other branches of instruction where a knowledge of form is required. Froebel, the originator of the system, begins with materials that are whole, substantial, and undivided—hence the solids form the opening group. From thence we pass to the parts, dealing with planes or surfaces.

The planes, forming Group II. of the system, are composed either of wood or paper. Amongst the first we find a box containing sixty-four squares, another containing sixty-four right-angled isosceles triangles, and others with equilateral or scalene triangles. An almost endless diversity of geometrical arrangements can thus be created. In the first stage the child may be considered to have been a discoverer—all was new to him. In the use of the plane figures his inventive faculty is called into play, and he becomes an inventor, while in other exercises he is required to copy, and thus becomes an imitator. The second great means of imparting instruction in Group II. is in the folding or plaiting of paper. The paper is white to begin with, and cut into four-inch *squares; colour is* next introduced, and in more advanced *work, triangles,* oblongs, and other forms are used. When

practicable all the occupations are made to bear on the object-instruction; thus when water is the topic little boats are made, or when the rabbit is being talked about a trough can be shaped out, roofs, boxes, books, and many other things suggest themselves, though some of the forms represented in books on the subject, as the bird, the jacket, &c., require a considerable ingenuity in the fabrication, and perhaps a still greater ingenuity on the part of anyone guessing what the things, when made, are meant for. Its greatest value would appear to be as a means of additional instruction in the more rigid forms of geometry, though doubtless a digression to a pair of boots or a windmill is at times agreeable both to the teacher and the taught.

The plaiting is a valuable training in numbers, in colour, and in invention. It is effected by weaving strips of various coloured papers into mats. Into the details of the process it is scarcely worth while here to go, but such colour-combinations form a conspicuous feature in any gathering together of Kindergarten results. The plaiting or weaving approaches the subject of the next group and prepares us for it.

From the consideration of planes the child advances in Group III. to a consideration of lines, the boundaries of these planes. Many occupations are used in illustration of this group, such as thread-laying, stick-laying, and pea-work. For the first of these a box of soft thread that is cut into lengths of twelve and eighteen inches is provided. In stick-laying small round white pieces of wood are employed. These can be used either for teaching number or form. All the straight-lined letters, as E, F, H, I, K, L, M, &c. can be made by them, and stars, stools, dog-kennels, hats, flower-pots, flags, and many other common objects represented. Later on curved objects may be attempted, as the sticks will easily bend after being laid some time in water. Thread-laying is similar in its nature. Both in thread and stick-laying we get the representations of objects on a flat

surface, as a table or drawing-board, but in the pea-work we are able to make more solid and suggestive forms, little chairs, houses, &c. being produced by driving the sharpened ends of our wood into peas that have been partially softened.

'Drawing' is also included, very justly, in Group III., the consideration of lines. Hitherto the young pupil has arranged into definite forms the materials, whether blocks, threads, pieces of wood or what not, put into its hands, but the children begin now to create the lines themselves by their own effort. The first attempts are made either on a slate or paper ruled all over with small squares. The earliest examples to be imitated are very simple in character, dealing with the length and direction of straight lines, the examples being on a chequered ground and divided into certain definite lengths and breadths by means of these squares. Many very complex arrangements can be ultimately produced from these simple elements. Oblique lines and curved figures are next added. After copying a varying number, a number dependent upon the ability and industry of the little pupil, he is invited to turn designer and create for himself other forms of a like character, and ultimately he is given a piece of unruled paper. The copies are, as we have already indicated, mounted on cardboard and cut out. These are placed on the slates and the lines that bound them marked out, the greater or lesser amount of additional detail being drawn entirely freehand. This aid is ultimately withdrawn, and all has to be done without any such mechanical assistance, a step that, in our humble opinion, should have marked the beginning, middle, and end of the work.

Group IV. of Froebel's system deals with points. The occupation called pricking is the great feature. Punctures are first made on the chequered papers, and geometrical exercises naturally form the examples again, but it is also *used to illustrate* the object-lesson, the form being pricked *on white paper.* Two sizes of needles may be used, the first

and largest marking out the outlines by large holes, while a smaller needle gives such details as the veinings of leaves and the like. Sewing enters into this class, the entry and exit of the needle giving points, and the connecting lines of coloured thread marking the pattern.

We now come to Class V., the so-called 'shapeless materials.' Painting and modelling are the two occupations assigned to this. As the first is the colouring of various designs on plain or chequered paper, one scarcely sees the full force of classing it as shapeless. The modelling may more legitimately claim a place, as by its aid the young student forms various objects from rough lumps of clay, wax, or gutta-percha, or even by means of sand, sawdust, small shells, and the like.

The system claims to promote the development of the religious, moral, and mental faculties, and the cultivation of the musical, poetical, and other artistic powers which may slumber in a child. The awakening of a love for nature is also claimed for it. With much of this we have here nothing to do, but one sees at once that a great deal must depend upon the gifts of the teacher. Never having in our own tender years stuck sticks in peas, laid out coloured cottons, or made mud-pies educationally, we are unable to speak practically as to its value to ourselves, but as we look at the diagrams employed we cannot but feel (and we of course only express our own opinion) that the system artistically has no great value. The geometrical forms recur in almost every exercise in wearisome iteration, while the actual drawing is taught on a system that is, we should say, distinctly unsound. Instead of taking forms that can only be managed by cutting out cardboard shapes and drawing mechanically round them, about as much drawing as running the finger along the key-board of a pianoforte is playing, simpler forms should be attempted without such extraneous aid. The marking out of forms, too, by means of a series *of pricked holes*, and 'shading' them by covering the paper

at that point with a great number of small holes closely set together, seems to us laborious trifling. We express our opinion, unfavourable as it is, freely, since we are aware that the treatment of the whole subject is easily accessible in the writings of Lyschinska and other specialists, and our readers have full opportunity of seeing elsewhere all that can be said in its favour.

In our parochial, national, and board schools, drawing is almost universally taught, and in almost every case according to a sound system. The advantages of the examinations in drawing held annually by the Science and Art Department are so great that almost all schools of this type place themselves in connection with them. These advantages may be briefly summed up as follows :—The school managers feel that the matter is taken out of their hands, and that those who have made the art instruction of the country their special study have the full responsibility of indicating the direction such study should take; by their system of prizes a stimulus is given both to teachers and scholars, while the pecuniary grants that follow when the result of the examination is known, are by no means unwelcome to the school managers. The art-power developed in these young children is naturally in most cases not great, but the gates of the temple of art are at least opened to them, they pass through much of the preliminary drudgery, and in many cases, as they grow older they pass in a higher grade of examination work, and if their taste for the work and their aptitude still increase, they probably, after leaving school, join some evening-class or art-school.

The examination held in such schools by the Science and Art Department is that known technically and officially as that of 'the first grade.' These examinations are of a very elementary character, and include freehand drawing from flat examples, freehand drawing from models, and the rudiments of *geometrical drawing.* The freehand examples to be copied *by the candidates* are simple and clear in character; no

ruling, tracing, or measuring is allowed, and in every case the reproduction is required to be either larger or smaller than the example. The model drawing is made from a group of two simple objects placed before the candidates—one of these objects is ordinarily straight-lined and the other curved, as for example a basin on a drawing board, or a gallipot on a tool-box. The principles underlying the successful drawing of objects are sufficiently simple when once grasped, but the subject is a difficult one to teach to very young children and some of the results are quaint in the extreme, some of the children endeavouring to represent in one view all four sides of a box, or both top and bottom of a basin. Individual teaching of the large classes found in such schools is almost out of the question, and in collective teaching the dullards often get hopelessly left behind. In fact, one of the great difficulties in collective teaching is the knowledge that the information given is being received with very varying effect, and the teacher must perforce either hold back the geniuses for the sake of the obtuse, or leave the dullards bewildered while the more promising members of the class are being helped forward. The first grade geometry is often very successfully taken up, the young candidates finding its demands on them for the knowledge of certain definite problems a more tangible thing than the comprehension of the principles of perspective involved in the drawing from solid objects. Both neat drawing and geometrical accuracy are required, but in schools of the lower type the expense of good instruments leads to the use of very inadequate tools. In preparing for this examination the teacher should explain and illustrate on the black-board the nature of the simple geometrical figures, such as triangles, the square, the circle, and the like, and then instruct his pupils in such simple exercises as the following :—To construct a rectangle, the length of its sides being given ; to divide a line into a certain number of equal parts ; to draw lines parallel and perpendicular to each other, both by means of the set square

and by geometrical construction ; to construct triangles and squares from given dimensions ; to construct an angle equal to a given angle ; to bisect a given angle ; to describe two circles of given radii touching each other.

The stimulus is threefold, and takes the form of payments, prizes, and grants. The regulations of the Government Department are necessarily open from time to time to alteration, but we find in a recent Directory before us that the payments are on the following liberal scale. One shilling for every exercise that is marked 'fair' by the examiners, one shilling and sixpence for each exercise marked 'good,' and two shillings and sixpence for all papers that get the highest mark, 'excellent.' These payments are made to the managers not only as a general encouragement in the cultivation of art teaching, but with the definite aim of assisting the cost of the maintenance and instruction of the drawing classes. No child who has been successful in any examination may be presented again in the same subject in the same grade.

Prizes are given to all children whose drawings receive the highest mark from the examiners. They consist of a small drawing-board and a T-square for success in freehand drawing, a set of compasses for the successful in geometry, and a box of colours for model-drawing. Grants, too, of 50 per cent. may be made, under certain conditions, to the managers of elementary schools, towards the purchase of approved examples, models, &c. These examples must be exclusively for school use, and always kept on the school premises.

These examinations, up till the year 1881, have been held simultaneously throughout the country on one day each March, but great difficulties having been met with in providing for the conduct of the examinations simultaneously, it is proposed that they shall in future be held from time to time throughout the year. There are, of course, many little details of management that any school committee would

require to know, but all necessary information can be obtained in the Directory published by the examining body, and we content ourselves with giving here the salient points of this admirable national system for encouraging art-teaching.

Middle class and private schools naturally have no claim on the national funds, but, under certain conditions, their pupils may be examined in the second or higher grade, and those who are successful will receive prizes or certificates. Into the nature of this higher examination we propose to go when the course followed in our schools of art passes under review.

Much of the teaching in middle class private schools is very empirical in its nature, as in many cases the managers of such schools know little or nothing of the subject practically, and the style of thing that makes most show in the shortest time is naturally most in favour, and as this sort of thing is also most popular with both pupils and parents, the art-master has a hard battle to fight when he endeavours to supplant the hollow sham by something more sterling. The fact that drawing is often charged for as an extra complicates matters, as the parent then holds that he has a perfect right to say what his child shall learn. Matters, however, have of late years much improved. Thanks to the prestige given by having the master from the Government School of Art as the teacher, a more genuine style of thing is making its way, and the steady progress of those who work their way onward step by step in one of the many schools of art, and get a real grounding, can now readily be compared with the meretricious shams produced by those others who are a law unto themselves, who shade before they can draw, who paint elaborate pictures before they can represent a brick or an egg-cup, making straight for the goal and claiming the chaplet of victory without running the race or undergoing the preliminary discipline. 'The commonplace is frequently very astounding, but perhaps the most extraordinary of all ordinary states of mind is that of the amateur

who expects to do, without earnest work and sustained effort, what the professional strains at, often in vain, his whole life long, to do—in a word, good work.' Some few years ago it needed all the prestige of the Government Art Schools to induce their students to adopt the methodical course they inculcated. In turning to the report presented in 1864 to Parliament on the Schools of Art, we find the master of one school says, 'they (the students) will not remain at all unless their direct and immediate wants are satisfied, and they do not like entering on any long course of systematic study,' and he only gives utterance to a difficulty felt by many others; but the system has now been sufficiently long before the nation to enable its efficiency to be tested, and many of our most distinguished names in art, as those of the painters of 'The Casuals,' 'The last Muster,' or 'The Roll-call' are borne by old students of these schools. On turning to 'The report of Her Majesty's Commissioners appointed to inquire into the revenues and management of certain colleges and schools, and the studies pursued and instruction given therein,' a report published in 1864, we find the following passage: 'The teaching of the masters from the schools of art was very unpopular with girls, and little used, because they spent much time on the elements, and did not quickly help the pupil to make up showy sketches.' The Commissioners, however, show an utter want of sympathy with this view of the question, and quotation after quotation could be given from their report showing the soundness of their views on art-teaching and their sense of its necessity as an element of the course of instruction in all middle-class schools.

The Commissioners had only really power to deal with grammar and other public schools, but made themselves as far acquainted with the procedure of private schools as their principals permitted. The following table—the report on all the schools that were visited within a certain district—may be read with interest.

	Percentage of schools teaching	Percentage of boys learning	Percentage of the boys in the schools which teach it who learn	Percentage of private schools teaching	Percentage of boys in private schools learning
DRAWING .	95	37	38	92	32
French . .	76	26	31	73	21
Music . .	45	11	26	50	9
Latin . .	87	46	56	80	32
Chemistry .	19	2	12	31	3

The position taken by drawing, it will be seen, is a high one, and especially as we gather from the context that in the majority of cases it was charged for as an extra, and was principally mechanical drawing or freehand drawing from flat examples.

Another analysis of the study of the boys in sixteen private schools gives the following numbers of pupils in each subject: Latin 177, French 113, Drawing 109, Music 29, Chemistry 21.

Perhaps one of the earliest recognitions of the due place of drawing in the school course is found in the scheme of teaching drawn up for the Free Grammar School of King Edward VI. in Birmingham, and confirmed by the Court of Chancery of May 5, 1838. Amongst other details we find 'that the governors shall appoint a master to teach drawing and design, and such master shall be paid a salary not exceeding 150*l.*' Any casual reference to the advertisement columns of the educational and other papers will show the hold that the subject has now taken, while the numbers of middle-class candidates yearly going in for the drawing examinations of the Science and Art Department, the Oxford or Cambridge locals, or the papers of the College of Preceptors, are a further proof both of the quantity and quality of the instruction imparted. In one very well-known school *supported by* a wealthy corporation, we are surprised to see

that drawing, like Spanish and Italian, is an extra, and can only be learnt out of school hours, while Latin, Greek, German, and even Hebrew, are parts of the regular school course. The school bears a high character and the fees are low ; the addition of the drawing fees raises the total at once to a quarter as much again. In most other well-known schools, as the Stationers' or the Birkbeck, drawing is fully recognised as an integral portion of the school studies, and is included as a matter of course in the general charge, but in the greater number of strictly private schools an additional charge is made. We thus find a very considerable variation of practice, as in some few schools it is not recognised at all, in others it is tolerated so long as it does not interfere with other studies, and only encroaches on the hours of recreation, while in others it takes its full place in the list of studies. In some cases, too, we find it with the prestige or ban, whichever it may be, of an added fee, and in others treated, not as a luxury, but as a necessity, and as such included in the general cost of the education.

On turning to the syllabus of a well-known training college for governesses, we find that two certificates are given for drawing, the 'A' and the 'B,' and that each of these has three grades—a somewhat involved arrangement apparently. The third, or lowest class of 'A' certificate includes outlines of leaves or flowers from memory, outline from piece of ornament in relief, construction of plane geometrical figures, and elements of perspective. The second class in addition requires a composition of flowers in outline, a drawing of a head from the antique, and an examination in the Discourses of Sir Joshua Reynolds, while the first class takes all the foregoing subjects farther, and requires in addition an original composition of fruit, flowers, or shells in water-colour or oil, and examinations in the principles of art and the history of painting. The 'A' certificate, of which the foregoing are the three grades, is somewhat loosely called the figure-drawing certificate, though it clearly includes a

good deal that is not within the legitimate boundaries of the term, while the 'B' certificate is for landscape drawing. The third class here includes sketching simple objects from nature and elementary perspective : the second class carries the perspective further, and requires some knowledge of tree forms, principles of colour and foreshortening ; while the first class calls in addition for a knowledge of projection of shadows, aerial perspective, a landscape in oil or water-colour from nature, and some knowledge of the characteristics of leading architectural forms. We give the scheme *in extenso*, as it may prove suggestive, though it will be sufficiently evident that the plan as it stands is somewhat cumbersome and petty, the ground covered being certainly not sufficiently extensive to require what may practically be considered six certificates.

The three great tests to which middle-class schools may resort are the examinations of the Science and Art Department, the Oxford and Cambridge local examinations, and those of the College of Preceptors. To the first two of these we have already alluded, so we may now deal exclusively with the third and last. Into the general composition of this body and the ground covered by its operations we need not here at all go at any length, though the following statistics, those for the first half-year of 1881, are interesting and valuable as showing the hold the College has in the esteem of the scholastic profession.

The midsummer examination began on the 14th of June, and was carried on at 22 centres,—viz., London (where there were 8 sub-centres), Birmingham, Brighton, Bristol, Cheltenham, Eastbourne, Exeter, Hastings, Huddersfield, Liverpool, Manchester, Margate, Newcastle-on-Tyne, Norwich, Nottingham, Portsmouth, Salisbury, Saltaire, Southport, Southampton, Sunderland, and York ; and, in addition to these centres, at 100 schools in various parts of England and Wales. The total number of candidates examined was 3,890, of whom 2,089 were boys, and 1,801 girls. The candidates were thus distributed :—

There were examined—

At the London Centre	464 boys
„ „	758 girls
At other Centres	517 boys
„ „	580 girls
At their own schools	1108 boys
„ „	463 girls
Total	3890

Taking the Christmas and Midsummer Examinations together, the total number of candidates who have presented themselves within the year is 10,143.

The number of candidates entered for drawing was at Christmas 3,260, or 52 per cent., and at midsummer 1,948, or 50 per cent.

The examination of teachers for the diplomas of the College was attended by sixty-four candidates. The examinations for pupils are held twice a year, and three classes of certificates are awarded. In the first class there are eight obligatory and eleven optional subjects; drawing from the flat, from models, colour groups, linear geometry, linear perspective, and mechanical drawing being amongst the optional subjects. In the second class there are six obligatory and four optional subjects, drawing being one of the latter as before. The first-class certificates of the College are recognised by Her Majesty's Judges and by the General Medical Council as guarantees of good general education, and consequently the holders of them who may be intended for the legal and medical professions are exempted from the necessity of submitting to the preliminary literary examinations held by the Incorporated Law Society, and by the various medical corporations of the United Kingdom. In addition to the pupil's examinations are those for the diplomas for the teachers. Every candidate, amongst other *things, must* make a fair copy of a subject in outline, and *also a drawing* from a group of common objects. He must

answer questions, too, on perspective. Oil and water-colour painting may be added at the option of the candidate. As a specimen of the sort of thing required, we may quote the diploma examination paper for Christmas 1880. In addition to a freehand example that had to be slightly reduced, an outline drawing had to be made from a group composed of a jar, two bottles, and a basin, and the following questions in perspective had to be worked out.

(1) Draw a rectangular block (scale half an inch to the foot, with the eye at a distance of 5 feet from the ground, and 14 feet from the picture plane), resting on the ground; with a base of 8 feet by 8 feet, and a height of 3 feet. Let one side be inclined at an angle of 45° with the picture, and the nearest edge be 4 feet to the left of the central vertical plane, and 1 foot from the picture plane. (2) On the block already given draw a frustum of a regular pyramid, concentric and parallel with the block, and having a base of 6 feet by 6 feet. Let the height of the frustum from the top of the block be 13 feet, and terminate in a square of 4 feet side. (3) On the top of the frustum already given as a base, draw a pyramid 4 feet in height.

As examples of the sort of paper the pupils have to work out we may give those of Christmas 1880 and of Midsummer 1881. In addition to an enlarged copy of a freehand example, a copy that of course has to be made without any measuring or ruling, we find the following items on the paper.

Model-drawing.— Make a drawing, not less than eight inches over, of the group before you, composed as follows:— a tea-chest is placed on the floor of the room, and upon it two dinner plates and two jam-pots, thus arranged—first a plate, then in the middle of this a jam-pot, and upon this again another plate and jam-pot. The centres of all these objects to be over one another in a vertical line. The top of the chest must be about the height of the seat of a chair above the floor.

Drawing in colours.—Draw carefully in pencil, natural size, and finish in water-colours, a large green apple peeled about one *third down, part* of the peel being left ribbon-fashion, hanging

down and casting a shadow upon the apple, which is placed between the leaves of a sheet of thick notepaper, so as, while resting upon one, to keep the other about vertical. The apple to be placed on the table with the light falling upon it from one side, and not from the immediate front or back.

Geometrical drawing.—(1) Draw an irregular pentagon, and construct a similar pentagon having its sides longer by one-third than those of the first. (2) Describe a circle of 1 inch radius, and through any point on its circumference draw a tangent. (3) Describe a circle of ¾ inch radius, touching both the line and circle in the last problem. (4) Within a square of 2½ inches side inscribe four equal semicircles having their diameters adjacent and each touching two sides of the square. (5) Divide a line 3 inches long in the proportion 3 : 4 : 6. (6) Draw an ellipse whose major and minor axes are 4 and 3 inches long respectively.

Perspective.—[N.B.—The problems are to be worked with the eye at the height of 5 feet, distance of picture 14 feet, and scale of drawing ½ inch to 1 foot.] (1) A square of 1 foot side lies upon the ground, and its sides vanish at 45° with the picture plane; its nearest corner is 3 feet to the right of line of direction, and 3 feet within the picture. (2) Upon the sides of this square, four other squares of the same size are constructed, forming a Greek cross. (3) The central square is the base of a right prism 4 feet high, and upon each of the others is constructed a right pyramid 3 feet high. (4) Place in perspective, in a vertical position, a target, 8 feet square and 6 inches thick. The bull's-eye is circular and 2 feet in diameter, and there is an outer circle 5 feet in diameter. The face of the target vanishes at 40° to the right, and its nearest point is 2 feet within the picture and 4 feet to the left of line of direction. (5) A line meeting the picture plane 8 feet from the ground, and directly above the centre of vision, is represented in perspective by a point. Find the angle that it makes with the ground.

Mechanical.—(1) A railway embankment is 30 feet high, 15 feet wide at top, and its sides slope at an angle of 45°. Show *plan of some 40 feet* of the embankment and a sectional elevation. *Scale 10 feet* to 1 inch. (2) An archway 20 feet wide, *piercing this embankment* at right angles, is composed of two

vertical walls 10 feet high, surmounted by a semicircular arch. Show its plan, and also the true form of its ends. (3) A right square pyramid 3½ inches high, with base of 2 inches side, pierces centrally a square slab of 3 inches side and ½ inch thick. The centres of the solids coincide, and the sides of the base of the pyramid are parallel to those of the slab. Draw plan and elevation. (4) Add a plan of the above, when one edge of the base of the pyramid and one edge of the slab rest upon the ground. (5) Construct a scale of $\frac{1}{84}$ to show feet and (by a diagonal scale) inches.

The paper for Midsummer 1881, after the necessary directions for the freehand drawing, runs as follows :—

Model-drawing.—Make a drawing from a group composed of a small cask, soda or flour barrel, with distinctly marked hoops and staves, laid inside a drawer taken from an ordinary chest of drawers. The drawer is to be placed upon the floor of the examination room, and the cask or barrel placed inside the drawer lengthways, in an inclined position, resting upon the bottom and one upper edge of the drawer. The candidates must in all cases be so placed as to see a portion of the side and end of each object. The drawing must not be less than 10 inches over, showing the hoops and staves. [N.B.—No marks will be awarded for shading unless the drawing is correct.]

Drawing in colours.—An empty flowerpot about 6 inches high, laid on its side, on a piece of garden matting, and any available cut-flower with one or more leaves, placed so as to touch the pot. These are to be placed on the table with the light falling upon them from one side. To be drawn carefully in pencil about half the natural size, and finished in water-colours.

Geometrical drawing.—(1) On a line 3 inches long construct an equilateral triangle. (2) About this triangle describe a regular hexagon. (3) In a circle 2¼ inches radius, inscribe a regular heptagon. (4) Describe a segment of a circle having a chord of 2½ inches and containing an angle of 45°. (5) Determine by construction a fourth proportional to three straight lines, 3¼, 2½, and 2 inches long. (6) Draw a parallelogram of which one side shall measure 2½ inches, and the distance between it and the opposite side shall be 1½ inches, one angle of the figure to be 120°. (7) Construct a square equal in area to this parallelogram.

Perspective.—[N.B.—The problems are to be worked with the eye at the height of 5 feet, distance of picture 14 feet, and scale of drawing ½ inch to 1 foot.] (1) Find a point on the ground 4 feet to the spectator's left, and 4 feet within the picture; from it draw lines vanishing to the picture at angles of 30° to the left and 60° to the right, each 2 feet long. (2) Complete a square of which the two lines form part. (3) Let this square be the base of an upright prism 8 feet high; across this, the sides in planes vanishing at 30° to the picture, place in a horizontal position another prism of the same dimensions, forming the letter T. (4) A drawing-board 4 feet square rests on one of its edges upon the ground, and vanishes to the left at an angle of 45° to the picture; and is inclined, rising from the spectator, at an angle of 45° to the ground plane. The nearest corner of the board on the ground is 3 feet within the picture and 5 feet to the spectator's right. (5) Show the perspective form of a circle inscribed on the board, touching the sides. (6) Suppose this circle to be the base of a right cone attached to the board 6 feet high; draw the cone.

Mechanical.—(1) Construct a scale of yards 5 inches to the mile, and give its representative fraction. (2) The plane of the base of a cube 2½ inches side, is inclined at 30°; required the sectional plan when cut by a horizontal plane ½ inch below its highest point. (3) A circle of 1 inch radius revolves on the circumference of a circle of 2½ inches radius. Draw the curve which a point in the circumference of the smaller circle will describe during one revolution. (4) Draw the plan and elevation of a tetrahedron, with an edge of 2 inches.

Where the teaching has been sound these papers should present no difficulty, while they are at the same time sufficiently exacting to prevent any merely meretricious and surface tuition from emerging victorious from the ordeal.

CHAPTER IV

Drawing in public schools—No uniformity of system—Winchester—Eton—The Public Schools' Commission—Westminster—Charterhouse—The Leech Prize—Rugby—The Rugby Art Museum and Art Library—St. Paul's School—Christ's Hospital—Marlborough—The Marlborough Art Society—Essay and sketching prizes—The South Kensington Sketching Club—The West London Sketching Club—Should drawing in schools be a compulsory or a voluntary subject?—The arguments in favour of either view—Defective amateur work—The advantages and difficulties of collective teaching—Sir John Coleridge on the position of the art-master—The art room—Compulsory drawing should always be supplemented by voluntary drawing—No royal road to success in art.

WE propose now to turn our attention to some of the larger public schools, and see how far in these the claims of drawing to a place in education are admitted. In the case of private schools one can only judge either by the establishments that have come under one's own personal knowledge, or in a more indirect way, by studying such statistics as those of the College of Preceptors or the lists of candidates for the University local examinations ; but in the case of the public schools various reports and pamphlets render the required information more easily accessible. It will probably be within the recollection of our more interested readers that some few years ago a commission of inquiry into our public schools was instituted, and to this we owe much valuable information.

Each school seems to be a law unto itself, the more or less artistic tastes of the head master going far either towards the encouragement of the subject or the reverse ; in some schools it receives little or no recognition, while others attach full importance to it. One public school has pre-eminently a great reputation for getting its pupils into the army, and here the claims of drawing are perforce fully ad-

mitted, while another, thanks to the prestige of a splendid gallery of paintings and an altogether excellent art-master, has created for itself a distinct art-reputation, its pupils preparing therein the necessary drawings and passing directly thence to the Schools of the Royal Academy. We proceed, however, to consider the various schools a little more in detail.

At Winchester the governing body does not officially recognise the claim of drawing, but the head master has provided some freehand examples, geometric models, casts, and so forth. The room in which the drawing work is taken is large and well-furnished with desks &c., and as well suited for the purpose as a room not specially devoted to art-instruction is likely to be. Those only learn who wish to do so, and the classes are held out of school hours. About forty are ordinarily learning. The work done is freehand, model in outline or shaded, shading from casts, geometrical drawing, perspective, building construction and architectural design, painting from still life, and, during the summer, landscape sketching from nature. No encouragement appears to be given in the way of prizes. Some six or seven years ago drawing was made part of the school work for the junior classes, but despite prizes, &c., the experiment was not successful, and was therefore discontinued after a two years' trial.

At Eton the art-master is also a house master. The drawing is an extra subject, entirely at the option of the parents, a fee of fourteen guineas per annum being charged for it. This charge has been fixed by the authorities of the school. Out of some 800 boys, the usual number of drawing pupils would appear to be about thirty to forty. We may here mention that when drawing at any school is a voluntary subject, the numbers will fluctuate in the most fitful way. We have ourselves sometimes had our voluntary classes so full that we have found ourselves overweighted, while at others the numbers in attendance have shrunk

almost to the point of discouragement. Anyone who has had anything to do with masses of boys will be aware how inexplicably certain school institutions come into the full sunshine of their favour or suffer from the cold shade of neglect. At Eton a proper art-room is provided, well fitted up with models and examples, and open four hours a day. All drawing is done out of school hours. One of the gentlemen examined before the Public Schools Commission thus expressed his opinion on the point. 'Inasmuch as a boy is not likely to draw carefully unless he is a volunteer, I think it had better be left to voluntary exertion, as it is. In our fourteen weeks of vacation a boy can learn a good deal of drawing at home. If drawing is added as compulsory work to all that is done at Eton a boy's health will suffer in many cases.' As very few boys care to do any kind of work at all unless under some degree of pressure, and are sent to school for the purpose of doing work, there seems no more reason why drawing should be relegated to the holidays than any other study; a boy's inclinations are not in any other direction the standard for the schoolmaster to work to. In the suggested scheme of the commissioners for Eton we find that 'it is proposed to provide out of the fee fund for the payment of teachers of music and drawing. The amount which will be required for this purpose has not yet been ascertained. It is stated conjecturally at 800*l.*' This is so far interesting as it shows that it was the desire of the Commission that drawing should occupy a definite position in the school course.

On turning to Westminster we find that all the boys are obliged to learn either drawing or singing, except the juniors, who learn writing instead. About two-thirds of the boys attend the drawing classes; of these there are nine, and each boy gets an hour's lesson a week. Eight prizes are given each year for the subject. The art-master has the use of large class-rooms, but they are used by the other masters as well, and are not, therefore, such as an artist would

altogether desire. Drawing can only be fully and satisfactorily taught where a room having proper light, fittings, and all needful appliances, as casts and models, is the exclusive possession of the art-master. The subjects taught at Westminster are freehand, model drawing, the figure, landscape and perspective, including in the summer the architecture of the Abbey and its precincts.

At the Charterhouse drawing is a voluntary subject. An annual prize, called the Leech prize, instituted several years ago, in memory of John Leech, is awarded. This is given for the best original study of any subject from nature done at the Charterhouse within the year, and the competition is very keen. There is a very suitable set of rooms devoted entirely to drawing, and any boy wishing to draw has access at any time. There is a large collection of models and casts. The work done comprises freehand, drawing from geometrical models, casts from the antique, perspective, and drawing and painting from groups of rustic objects, armour, and other objects likely to interest; also during the summer months outdoor work in the neighbourhood. A fee is charged.

The drawing at Rugby is essentially a voluntary subject. The classes are mostly held during playhours, but notwithstanding this manifest drawback, a considerable number of the boys avail themselves of the opportunity of study. The course of study has recently been remodelled, and the practice of the Government schools of art adopted as far as experience has proved it suitable to the requirements of the pupils. Drawing from objects is introduced at as early a stage as practicable, and the other subjects include drawing from the cast, freehand, geometry, perspective, architectural drawing, and painting in oil and water-colours. Boys intended to enter the army study with a view to the examinations. Saturday afternoons are given to sketching objects in the cases of the art museum, or, in propitious weather, *to sketching* out of doors from nature. The art museum *recently erected* possesses many objects well adapted to cul-

tivate the taste of the boys ; numerous oil-paintings, many original drawings by old masters, autotypes, photographs, engravings, etchings, ancient pottery, coins, electrotype reproductions, &c. There are also in the art library numerous standard works for reference on fine as well as decorative art. Valuable additions to these are frequently made, either as presents from friends, old Rugbeians or others, or purchases by the school authorities. Besides the permanent collection, several exhibitions of works of art have been held in the museum and have proved most instructive. Two of the catalogues are before us as we write, that for 1879 and that for 1880. Both are very similar in character. We find amongst the pictures and drawings examples of Bellini, Brill, Correggio, Creswick, De Wint, Danby, Flaxman, Gainsborough, Giorgione, Lawrence, Morland, Murillo, Prout, Reynolds, Rubens, Titian, Turner, Vandyck, Velasquez, Wouvèrman, and many others. The Science and Art Department contributed some hundreds of art objects and drawings, and Queen's College, Oxford, lent its valuable plate, MSS., &c. These exhibitions, so interesting in themselves and so valuable as infusing an art-atmosphere, are not only freely accessible to the boys, but are thrown open to the public, thus affording the whole country-side an opportunity of enjoying the wealth of art-material gathered for their benefit. The exhibition was in the year 1880 open for 51 days, and was visited by 4,048 persons. The art-master is also the curator of the permanent museum.

Of St. Paul's School we have been able to gain no information, but the following extracts probably sufficiently deal with the past and the present. In the report of the Schools Inquiry Commission the school is thus referred to :—'We find that in this alone of all the schools we have had to do with, no provision whatever is made for instruction either in music or in drawing. The objection that St. Paul's is a classical school will hardly, we consider, be urged as a *sufficient* apology for this omission, or rather, perhaps,

oversight on the part of the governing body.' It is then suggested 'that the head master be authorised to appoint a German teacher, masters of drawing and of music, to be paid out of the school funds, and that half-yearly prizes be given for proficiency in these subjects.

On turning to the last report of the Science and Art Department we find that St. Paul's School submitted 51 candidates for examination in the subjects of the second grade, that 36 of these did sufficiently well to be classed as successful, while the drawings of nine of these were of sufficient excellence to obtain prizes. As these examinations are in freehand, model drawing, geometry, and perspective, the general character of the teaching is clearly indicated, while the proportion passing no less clearly indicates that the work is thorough.

At Christ's Hospital drawing is liberally encouraged by the Governors, and receives numerous prizes. It gains, moreover, a considerable prestige in the school from the fact that once a year the boys exhibit their drawings before Her Majesty the Queen. The boys begin drawing as soon as they reach the third form. Here, again, we find the work beginning with the most simple exercises in the elements of form, passing on to figures of more pronounced and ornamental character. A model, too, is placed in front of a class, and the pupils instructed in the principles necessary to its correct delineation. No shading is permitted except from the round, and the groups of objects become more and more complex. Perspective is taught to the more advanced pupils. Everything is scientifically taught on sound principles, and by a well-considered course. Over 400 boys learn; these are subdivided so as to bring about 28 boys in each class. The average age of the boys is 14, and they get two lessons a week of 1½ hours each. The Royal Mathematical boys, intended for sea-service, take the same course until they begin their special technical education in drawing, such as charts copied from flat examples and marine objects,

bridges, &c., from models. Formerly their lessons in marine surveying were copied from engraved examples, but the late master devised a very cleverly executed model of a coast-line—here a sandy and shelving shore, and there a bold rocky promontory or towering cliff. This large and most comprehensive model interests the boys greatly, and gives them much better practice than the flat engravings, and is, indeed, as near an approach as possible to the actual drawing required in the service. We find, on turning again to the Report of the Science and Art Department, that 210 candidates were sent in for the first-grade examination, of which 46 were successful, and 224 candidates went in for the second or higher grade—of these 50 were successful, 19 being prize-takers.

At Marlborough the whole of the modern side learns drawing as a school subject and in school hours, while in the upper school attendance is voluntary and limited to out-of-school work. All the boys in the lower school receive once a week in school-hours a lesson in either singing or drawing. In the lowest division of the modern school the work done is freehand, and in the next freehand and geometry are taken in alternate lessons. In the next two divisions model-drawing and geometry alternate, and in the next again, the work is exclusively model-drawing. The groups are composed of objects of pottery or still life, objects selected for their interest, good form, and richness of colour, as in this division the pencil is laid aside and the brush taken up. In the highest division the work becomes more technical where a boy's future career requires it, and includes perspective and the special course required for the army and other examinations. In addition to the form work there are several hours each week open to voluntary work, when personal tastes can be more readily consulted and individual careers assisted more fully than is possible in school-time. Water-colour work, drawing from the cast, engineering or architectural work, and various other ramifications of the subject can then be advantageously taken up. All the drawing work is

taken in one or other of two large rooms, each provided with suitable cabinets for the storage of models, examples, and the like, but in a future enlargement of the College buildings it is proposed, we believe, to include that great desideratum, a room exclusively devoted to art-work. With the exception of a small fee levied by the authorities on those who are being prepared for the army, no charge is made for tuition, and at the two prize-giving epochs of the school year, the claims of successful drawing boys do not go unheeded.

To give a little more reality to the work, to enable beginners to see really good things, and to show them that their own endeavours were the stepping stones to higher aims, an Art Society, open to the whole school, was established in the year 1877. Rugby, as we have seen, has established an art museum—a rapidly growing and most valuable collection; while Marlborough is the first of our public schools to establish an Art Society. This being so, we may advantageously give some few details of its working. Though drawing has for years formed a portion of the regular school course of work, there had up till the date of the formation of this society been no opportunity for the gathering together of those whose tastes were more especially artistic. Well-wishers amongst the masters have enrolled themselves as honorary members, and a committee representing these and the school members makes all necessary arrangements. We see in the list before us, for the summer term of 1881, these honorary members were 24 in number, and the school members 36. Fortnightly evening meetings are held at which papers on art topics are read, either by boys or masters, and objects of art interest are shown. Subjects are from time to time given out for illustration, and the drawings exhibited on the following meeting. Prizes, too, are awarded for the best essays to be read before the *society,* and for the best show of holiday work. During *the summer days* sketching parties are formed. At the *last competition* for the essay, prize-boys sent in essays

on the following subjects, the choice of subject resting entirely with themselves: 'The Motive of Sacred Art,' 'The Life and Works of Thorwaldsen,' 'St. Mark's, Venice,' 'Roman Art,' 'Tintoretto,' &c. Some of these were thorough and thoughtful, altogether painstaking and praiseworthy; while others, as the work of boys, were naturally more crude. In choosing subjects for illustration, care should always be taken to select such as will bear a considerable variety of treatment, and give as many different tastes as possible an opportunity of attempting them. The following are a few of the subjects that have been given out: 'War,' 'Spring,' 'A line from Gray's Elegy,' 'A Proverb illustrated,' 'Gone,' 'Repose,' 'The Nineteenth Century,' Various art periodicals are taken in, and a library is growing up. A small class-room is given up, and this is used by any of the members as a reading room. The subscription for school members is one shilling a term, and for honorary members as much again.

As it always becomes after a while somewhat of a difficulty to find suitable subjects for illustration, we may here digress so far as to indicate what other societies have done in the same direction.

The prospectus of the South Kensington Sketching Club is before us as we write. We find from it that anyone wishing to become a member must submit an original sketch for approval, that no copies are admissible, and that members are fined if they do not send in drawings. Amongst ordinary schoolboys we should always decide that a good original is altogether better than a good copy, but that a good copy is better than a bad original: the fact of its being a copy must of course always be stated. The power of original composition calls for more knowledge and artistic experience than falls in any great degree to most schoolboys, and in many cases a boy will profit far more by making a careful copy of good work, than by endeavouring to *excogitate ideas* for himself; but in the case of art-students

matters stand evidently on a different footing. The idea of imposing a fine on those who fail to contribute is a good one, being a gentle corrective of apathy, but its operation amongst boys would be very doubtful. It might possibly lead to a large access of work, or, more possibly still, to a marked diminution of members.

In the South Kensington Club, two subjects, one a figure-subject and the other a landscape, are given out for each month, the programme being drawn out in advance for the ten months that form the school year. For the year 1881 we find the following figure-subjects: 'Gossips,' 'Nathan before David,' 'Suspicion,' 'Guinevere,' 'Rest,' 'Isaac meeting Rebekah,' 'A hard Struggle,' 'Scene from Ivanhoe,' 'Just in Time,' 'David and Saul in the cave of Engedi.' The landscape subjects are: 'Fair Weather,' 'Autumn Leaves,' 'Still Waters,' 'After a Storm,' 'A Snow Scene,' 'Hill Country,' 'Far Distance,' 'A Gleam of Sunshine,' 'Rocks,' 'Leafy Shade.' For the previous year, 1880, they were as follows: 'A Scene from an old Ballad,' 'Jonathan and his Armour-bearer,' 'Captives,' 'Cinderella,' 'The Return,' 'The Parable of the Ten Virgins,' 'In Difficulties,' 'Rebekah at the Well,' 'Rivals,' 'Theseus and Ariadne,' 'A Summer's Noon,' 'Autumnal Tints,' 'Hills and Hollows,' 'A Farm-yard,' 'A line from Tennyson's "Brook,"' 'Reflections,' 'In a Wood,' 'Across the Meadows,' 'A Ruin,' 'A lonely Road.'

The West London Sketching Club, a society in connection with the West London School of Art, introduces four distinct classes of subject into its scheme of work, and one or two prizes are given for each section. All drawings must be original and unnamed. The following is the list of subjects for 1881.

I. Figures. II. Animals. III. Landscapes. IV. Designs.

January	I. A Nursery Rhyme. II. A Captive. III. A Churchyard—'Neglected turf and quiet stone.' *IV.* (*a*) An Illuminated Calendar for the year 1881. (*b*) A door-knocker, in bronze.

Feb.	I. The Parable of the Sower. (*One or more Sketches.*) II. Frolicsome. III. A Windmill. IV. (*a*) A Wall-paper. (*b*) A dining-room buffet.
March	I. The Tempest. (*Shakespeare.*) II. Forbidden Fruit. III. 'The stormy March has come at last, With wind and clouds and changing skies.' IV. (*a*) Decorated door-panel. (*b*) Wrought-iron umbrella-stand.
April	I. Ploughing. –'Plough deep while sluggards sleep.' II. A Chase. III. Sunset. IV. (*a*) A dessert plate in blue and white. (*b*) Back of a hall-chair, in carved oak.
May	I. 'Soft is the music that would charm for ever.' II. Ferocity. III. A Bridge. IV. (*a*) A book-cover, in stamped leather, and gilt. (*b*) A drinking fountain, in terra-cotta.
June	I. King Lear. (*Shakespeare.*) II. Young Ones. III. 'The thirsty earth soaks up the rain.' IV. (*a*) A table-top, inlaid with various woods. (*b*) Wrought-iron gates for a park.
July	I. One of Æsop's Fables. II. Intruders. III. 'The woods against a stormy sky Their giant branches toss'd.' IV. (*a*) A stained-glass staircase window for a mansion. (*b*) A hand-mirror, the frame to be carved or inlaid.
August	I. 'Oh, Pilot! 'tis a fearful night, There's danger on the deep.' II. Mischief. III. 'How sweet the moonlight sleeps upon yon bank!' IV. (*a*) Two or more designs for backs of playing cards. (*b*) A wrought-iron grille over doorway, (4′ by 2′), quarter size.
September	I. ROMEO—Courage, man! the hurt cannot be much. MER.—No, 'tis not so deep as a well, nor so wide as a church-door; but 'tis enough. (*Romeo and Juliet. Act iii., Sc.* 1.) II. In the Arena. III. 'The ripe harvest of the new-mown hay!' IV. (*a*) A design for a fan. (*b*) A claret-jug.

October	I. Elijah. (One or more Sketches.) II. On the Track. III. '——On and up, where Nature's heart Beats strong amid the hills.' IV. (*a*) A card-case, inlaid. (*b*) An inkstand.
November	I. 'On the bare earth expos'd he lies, With not a friend to close his eyes.' II. After the Battle. III. A rock-bound coast. IV. (*a*) Fire-screen, in stained glass. (*b*) Brass fire-dog.
December	I. Christmas Waits. II. Lost in the Snow. III. 'See, Winter comes, to rule the varied year.' IV. (*a*) One or more Christmas Cards. (*b*) A loving cup.

In noting the diversity of practice in the various schools, several questions naturally suggest themselves, and with one of the most evident of these, the question of compulsory or voluntary attendance, we may now deal, though we feel better able to review the arguments for and against than to pronounce a definite decision one way or the other.

Where the drawing work is compulsory, it becomes at once possible to insist on any kind of work that the master thinks best for his pupils, entirely irrespective of the likes or dislikes of the pupils themselves, hence a more thorough grounding in the elements becomes possible. The first steps of any kind of knowledge that is of any real value at all must be more or less tedious, and it is just this preliminary grounding in drawing that most beginners would gladly shirk if possible, hence we sometimes see young ladies painting in oil and water-colour when it is only too evident that they cannot even draw, but being voluntary pupils they have taken the matter into their own hands. We remember seeing, a short time ago, the oil-painting of a young lady, 'done out of her own head,' as schoolboys say, from an engraving representing the Dogana of Venice, but, though *the tints were gorgeous* and to spare, she could not even copy *correctly what* was before her or understand the meaning of

the various directions of the lines, hence the drawing of the architecture would have disgraced a tyro going up from a national school for an examination in model-drawing. The pupil believes in such work, not knowing her own shortcomings, for the blind cannot realise at all what sight must be, and others are too ignorant, or too polite, to undeceive her. It is a very curious thing, that though all analogy points the other way (the student who would read Virgil, Goethe, or Cervantes in the original, going through months of preliminary grounding, and even the man who puts up a four-roomed cottage, rearing his modest pile on some little foundation), the votary of art alone expects to build where he has not delved, to reap where he has not sown. Though an adverse criticism of such work may be often ascribed to professional jealousy, the real facts are as follows—Real excellence can only be the result of persistent and life-long endeavour, and only artists can really comprehend artist's work ; but a certain meretricious approach to this, sufficiently near to win the applause of those whose opinion on the matter is worthless, can be made, hence we get two very distinct standards by which such work can be judged, that of those who know, and that of those who think they do. We only this summer had a young lady pupil who was desirous of learning how to sketch from nature, and was prepared to have four lessons ; on the other hand we know men who are content to arrive at the same result by long hours of daily practice, continued day after day, month after month, and year after year. For them no creamy mount for every scrap of work, no wealth of golden frame, no honoured place on the paternal walls, no honeyed compliments, but years of patient labour and of noble discontent. Is it reason, is it justice, is it even common sense, that the work of some few hours or days can be at all put in the balance with that of a lifetime? Our expression, *noble discontent*, may perhaps jar unkindly on some sensitive ears, but the grandest work springs from those who feel this the most, and who

realise most keenly how unattainable is their ideal, while the self-complacency shown by some beginners in their work is a wall of adamant that shuts them in on every side from all healthy influence, all real study.

This compulsory grounding in the elements, though the most beneficial course for one's pupils, adds to the difficulty of the master, as the pupils often approach the work reluctantly, and besides his tutorial duties he has to assume that of the disciplinarian. Where some five-and-twenty boys, all forming one class in the general school arrangements, are poured at once into the room for drawing, and some half of them have no taste at all for the subject and only regard it with any favour because they think it an easier way of getting through an hour than some of the other school subjects would be, some considerable amount of tact will be necessary to keep all working well, while in a voluntary class one starts at once with the great advantage of knowing that all who come, come of a willing mind. Collective teaching, the only kind possible where the compulsory attendance of large classes is in question, necessitates that all should be doing the same kind of work ; yet even then, in large classes not specially arranged according to drawing ability, it becomes difficult to hit the mean that will prevent the geniuses being too hopelessly held back by the dullards, or the dullards neglected for the pleasanter task of helping on the able and willing. Of course too in voluntary work the master can sit down for some ten minutes or so with one pupil, and clear some point up once for all, but this is manifestly impossible in large compulsory classes, where half the members in such a case would be doing little or nothing. Compulsory work may at times reveal the existence of talent in some boy that in voluntary hours would be disporting himself in the cricket-field, but to this we need not attach much importance, as a boy really fond of art-work would be willing to make some *sacrifice for it.* It sometimes enables a boy to find out what *his real powers* are, and may thus influence his after-life.

The boy, for instance, who is regarded by his classical master as a mere cumberer of the ground, may never be a rural dean, but failing this, he may become a very good architect or engineer. Some little time ago in a big school we filled up a boy's 'report' as follows: 'In all respects excellent; am exceedingly sorry to lose him,' and found that another master under his special heading had written, 'Has taken no pains with his work this term, and has been uniformly idle and indolent. So long as this apathy continues he cannot hope to succeed in anything.' The one report would somewhat gild the dark cloud cast over the boy's career by the other, and be some little indication in which direction after-success might be looked for. After leaving, the boy went up to South Kensington, adopted art as a profession, and still from time to time takes pleasure in reporting his progress to us.

Where the work is compulsory its amount can be accurately estimated and a fixed salary given. This in the result might or might not be more than a master would obtain from fees derived from voluntary pupils, but it at least has the advantage of placing him in a more independent position. He is not hampered by the feeling that if he does not make the work thoroughly popular, and defer, very possibly against his judgment, to the wishes of his pupils, his income will suffer, nor can the boys feel that they are patronising him and his subject by coming to him.

Where the art-master is in daily attendance, and has the full weight and responsibility of teaching, maintaining discipline, &c., his position should as much as possible be assimilated to that of his colleagues. Boys have keen eyes, and easily detect such things. Where, owing to old unworthy prejudices, the art-master is not frankly received as a fellow-member of the magistral staff, not only he but his subject suffer damage in the eyes of his pupils, and it appears an absurdity to engage a master and yet deliberately hamper his powers. The remarks of Sir John Coleridge, when *examined before* the Public Schools Commission, bear very

appositely on the point. He says, in answer to a question on this matter: 'Whenever a teacher has had a gentleman's education he should be put on precisely the same footing as the regular assistants. In all respects, as regards his dress and everything else, he should be the same, and should have the same authority.' He was then asked, 'Do you mean a University education?' To this he replied, 'I purposely said a gentleman's education: for instance, a drawing master or a music master may not have had a University education, and yet may have been liberally educated.' A good art-master has gone through as sound a training for his post as any of his fellows, and he might as legitimately scorn his colleagues because they did not hail from South Kensington, as that they should look down on him because the Oxford or Cambridge hall-mark was missing. The results required being different, why need they go through his special training or he through theirs, and why should the fact of his not having gone through this special and needless training tell against him? A sculptor is no worse certainly in his profession through not having spent some few of the opening years of his life in a lawyer's office, or eaten a stipulated number of dinners at Lincoln's Inn, nor do we require our medical men to pass examinations in navigation on board H.M.S. 'Britannia'; and it by no means follows that because good men can be trained by the shores of Isis or of Cam, that these classic streams have a monopoly of the production. Practically, we at once see that they have not, for with few exceptions all the greatest men, those who have made most mark in the world, as rulers of men in our vast Indian empire, as poets and men of letters, as guiding lights in the great fairy-land of science, as the bearers of the national honour on the tented field or the far-stretching ocean, as the great philanthropists and merchant-princes of our land, the beneficent army of surgeons ever fighting disease and death, or the *names most illustrious* in art, alike owe nothing to the training of Universities.

The art-master should be provided with a room fully adapted to his requirements in light, arrangement of desks, &c., and this room should be his exclusive domain. None of his work should be done out of it, and no other person's work should be done in it. This should be the home of the master, and its walls should be hung with examples of the best work procurable : it should also of course be well supplied with suitable models and casts. Where drawing is compulsory the boys should come in small drafts—a dozen at a time would be ample ; by a little arrangement it would appear possible to have the large forms of public schools divided say into halves, as it would enable both the form-master and the art-master to deal with them in more detail, half being with one master and half with the other at a given hour, and in the following hour the two halves being interchanged. In an ideal art-mastership, one would desire to have the boys coming according to their proficiency, though probably the general arrangement of the other classes would always prevent this. Still the fact that matters cannot be ordinarily so arranged, is one of the art teacher's difficulties, a difficulty that other masters would promptly feel if the case were reversed, and boys were told off for Latin and Greek in batches regulated by their proficiency in freehand or model drawing.

As compulsory drawing by large bodies of boys simultaneously must necessarily be little more than a grounding in the rudiments, it should always be supplemented by voluntary drawing for all those who are desirous of carrying their knowledge further, and building on this substructure some of the more advanced branches of study. To such as these the art class-room should always be open, and its master prepared to aid them to the uttermost. This would require the almost constant attendance of the master, but no master whose heart was in his work would feel anything but satisfaction in finding these opportunities of instruction valued by his pupils, nor should the satisfaction arising from a sense

of the appreciation of his services, as shown even by the pecuniary standard, be withheld him. Our highest class schools require good men, and can afford to give them adequate remuneration, though in one school we know of, the salaries of the art-master and of the professional cricketer, who coaches up the boys in the playing-field, are the same in amount, and in another the art-master, who gives up his whole time to the school, receives 200*l.* per annum, while his colleagues, who also give their whole time, receive sums varying from more than double this to over eight times as much. Two in the official record of the Schools Commission are put down as receiving over 1,600*l.*, two are over 1,500*l.*, two are over 1,400*l.*, another over 1,200*l.*, while others are in receipt of 870*l.*, 765*l.*, 650*l.*, 615*l.*, and so on.

If in some of our foregoing remarks we may have seemed to have been somewhat severe on some of the non-professional followers of art, we would desire to explain that there are amateurs and amateurs, the term covering and including very diverse types. The true amateur is not necessarily inferior to the professional, indeed some amateur work is far before some professional work. One indeed has the stimulus of working at it for a livelihood, and can only hope to hold his ground by good work, while the other has no less a stimulus in his love for it. How often have not artists felt that were it not for the exigencies of daily life, their pictures could be so much better! The true amateur is free from all anxiety on that score, and all that he does is wholly a labour of love, but all arts, whether studied as professions or *en amateur*, must be studied thoroughly by all alike who would excel in them; there is no royal road, no easy set of rules, by which the lazy and the superficial can attain to the same level as the toilers. It is no more admissible for the amateur to begin at the end than for the professional. Those who have had the advantage of seeing collections of drawings and sketches by the old masters, or have penetrated at all into

the folios and sketch-books stored in hundreds in the studios of our living artists, will have enjoyed a great artistic treat and possibly have learned a most useful lesson. These sketches are of incalculable interest to the art student, for they show how, in careful working out of detail, the artist has built up step by step the embodiment of his idea, and one sees how things which in themselves might to the uninitiated appear trifles, are dwelt upon and considered over and over again until the idea is perfected. In the memorable words of Michael Angelo, 'trifles make perfection, yet perfection is no trifle.'

Having now briefly traced the opportunities of learning art open to a pupil from the day his infantile fingers plaited straws at the Kindergarten, to the time when his school-boy days come to an end at Eton or Rugby, and the world opens brightly before him, we now consider in what special directions he may yet continue to pursue, if it so please him, his study of art. Foremost of course among these, if he become Cantab or Oxonian, are the admirable art-professorships now established at these and other universities; but if his career take him at once into the whirl of life, the numerous schools of art afford him all the assistance that he needs. Of all these, however, and other more technical schools, we may, as better befits their dignity, more advantageously discourse at the fair beginning of a new chapter, than attempt them here as a supplement to what has gone before.

CHAPTER V.

The studio system of pupilage on the Continent—The origin and first aim of Government schools of design in Britain—The formation in 1852 of a Department of Practical Art—Reports, minutes, lectures, &c., detailing the rise and progress of the Science and Art Department—The transfer from Somerset House to Marlborough House, and thence to South Kensington—Statistics of the present position of the Department; pupils examined, prizes awarded, &c.—The metropolitan and provincial art schools of the present date: the date of their establishment, and the number of their pupils—Art classes—The examination of training colleges for teachers—The pecuniary aid granted to art-teaching—The rise and progress in art-teaching in Manchester from 1838 to 1881—Occupations of students attending art-schools—The course of instruction at South Kensington — Art-masters' certificates — Specimen examination papers in historic ornament and painting—The national competition drawings—Local prize lists—The Mence Smith travelling scholarship—Vacation work—The South Kensington Museum and Art Library—The regulations for copying in the public galleries—The schools of the Royal Academy: their origin—Regulations for candidates for admission—Probationers—Duration of studentship—The course of study—The teaching staff—The professors and their lectures—The library—Scholarships and travelling studentships—Medal awards—The Turner gold medal and scholarship—The Creswick prize—The encouragement of line engraving—Mural painting.

In the Middle Ages in Italy, and to the present day in Belgium and France, when an art student attained a sufficient knowledge of the grammar of his art to express himself fairly well in drawing and in colour, he entered the studio of some man of great reputation, of some acknowledged master of his art. He became not only his pupil and assistant, but enjoyed his friendship. Working with him for several years he gained his confidence and obtained his advice, and later, when he began life on his own account, *had at command* not merely his own experience but the *accumulated* experience of the master who had taught him.

Besides obtaining a guide he found amongst students of his own age those who became his friends. These men formed what was called a school, and they progressed together in art and in their life-career. Artists who started on such a basis had an immense advantage over those who had no such community of experience, and while we cannot but admire the assiduity of the self-taught man, we realise to the full how much valuable time has been lost in the manufacture. It is a matter of regret that it is so little the custom in this country to encourage this system of pupilage, for half a dozen working together under a competent head, are much more likely to spur each other to emulation and to keep on the right track, than scattered units can be. Schools of art, however, now go far to remedy this want.

In the year 1837 the attention of the Government was aroused to the fact that a greater diffusion of the knowledge of the art of design was necessary to the safety of our manufactures in their competition with the productions of other countries, and it was resolved to establish Government schools of design. In the first establishment of these schools the object was not the stimulation of a general love of art amongst the people, nor the furnishing of various classes of the community with that special kind of drawing which bore upon their particular trades, but was avowedly and exclusively the education of designers for manufacturers, and to this end alone, at first, were all the efforts of the authorities and the studies of the schools directed.

This attempt to establish schools of design was the first great proof of the necessity of establishing schools of drawing, and that the new power should not be limited, as at first proposed, but spread as widely as possible. It soon became evident that the manufacturer, after all, only kept abreast of public demand, and that it was at least as necessary to diffuse a general appreciation of art as to secure good designing power in a few isolated instances, and since the International Exhibition of 1851 this view became rapidly

strengthened. From 1837 to 1852 may be regarded as a period of experiment. In 1852 the central school of Somerset House was under the immediate control and management of the Board of Trade, and there were 17 provincial schools partly supported by local effort and partly by Government aid. The whole cost of the schools in London and the provinces, including management, figures in the estimates at 15,000*l.*

In the early part of 1852 the Board of Trade, feeling probably that the matter lay rather outside their sphere, proposed the constitution of a Department of Practical Art, and this in a short time became the Department of Science and Art, the title it yet bears. Interesting as the history of the rise and progress of this great Department is to follow, it would take up more room to do the subject justice than we can well spare, but we can at least indicate, for the sake of those caring to pursue the subject further, where fuller details may be obtained. These are as follows :—

1835-36. Report of the Select Committee appointed to inquire into the best means of extending a knowledge of the Arts and Principles of Design among the People, &c. August 1836.

1836-47. Minutes of the Council of the Government School of Design. Printed for the use of the Council. 3 vols.

1841. Report to the President of the Board of Trade by the Provisional Council of the School of Design. February 2, 1841.

1842-46. Reports of the Council of the School of Design to the Board of Trade, dated March 1843, May 1844, July 1845, June 1846.

1846. Report of a Special Committee of the Council of the Government School of Design, appointed on November 3, 1846, to consider and report on the state and management of the School.

1847. Report of the Second Special Committee of the Council of the Government School of Design. June 1847.

1849. Report of the Select Committee appointed to inquire *into the constitution* and management of the Government School *of Design.*

1849. Statement by Mr. Porter, printed with the Estimates for Education, Science, and Art for 1850.

1850. Reports and Documents relative to the Head and Provincial Schools of Design. August 1850.

1851. Reports and Documents exhibiting the state and progress of the Head and Branch School of Design. Addressed to the Board of Trade by Mr. Deverell. August 1851.

1851. Statement by Mr. Northcote, printed with the Estimates for 1851.

1852. Correspondence relative to the reorganisation of the Department of the School of Design. Printed with the Estimates for Education, Science, and Art for 1853. Minute by Mr. Henley.

1852. Report of the Department of Practical Art.

1854. Letter from the Board of Trade to the Treasury, printed with the Estimates for 1854.

1856. Estimate for the Iron Building at Kensington for 1856.

1860. Report of the Select Committee on the South Kensington Museum.

1864. Report of Special Committee on Schools of Art.

1853 to the present time. Annual Reports of the Department of Science and Art.

In addition to these more formal reports to Parliament, much valuable information can be gathered from the Directory published from time to time, and from lectures &c. As instances of these latter we may refer to one 'on the facilities afforded to all classes of the community for obtaining education in art,' by Henry Cole, C.B., and 'on the methods employed for imparting education in art to all classes,' by Richard Redgrave, R.A. It may, however, in passing be interesting to set on record the names of the schools of design and the date of their formation. The head school, as we have already seen, was established in London in 1837. Other schools were established in Bloomsbury, Birmingham, York, Manchester, and Spitalfields in 1842; Nottingham and Sheffield in 1843; Coventry and Newcastle-upon-Tyne in 1844; Glasgow in 1845; Leeds and Norwich in 1846;

Hanley and Stoke-upon-Trent in 1847 ; Paisley in 1848 ; Dublin in 1849 ; Belfast and Cork in 1850 ; and Macclesfield, Stonebridge, and Worcester in 1851. All these, it will be noticed, are in well-known seats of various manufactures. In 1853 the head school was transferred to Marlborough House, and in 1857 it was once more moved, taking up at South Kensington what we may now conclude to be its final home.

The growth of the Science and Art Department may be best realised if we give some few statistics of its present operations, culled from its twenty-eighth report, dated 1881.

We have already seen that our elementary day-schools throughout the country largely avail themselves of its examinations, and we find as a striking illustration of this that in 1880, 554,785 children were brought to the test, and 13,494 pupil teachers and monitors. These were so far successful as to gain a total of 43,107 prizes themselves, and their schools through their labours received a grand total of 43,203*l.* 1*s.* 8*d.* in payments, a certain sum being granted for every candidate giving evidence of having been satisfactorily taught. 4,785 elementary schools were examined in 1880, being an increase of 269 on the previous year. The total number of examination papers worked was 717,920, many of the children taking up more than one subject. The first grade freehand papers were 480,950, representing an enormous amount of small hopes and fears, while the geometry and the model drawing respectively in the same grade were 96,130 and 87,900. In the second, or more advanced grade, the freehand and geometry papers were 27,400 and 13,819 respectively, and the perspective and model drawing 2,821 and 8,900. The year's increase in this section of the Department's work is shown to have been over forty-three thousand more children taught drawing, and over forty-four thousand more exercises worked at the examinations.

In the schools of art the candidates for the various

subjects of the second grade examination were over 10,000 in number, of whom over 6,000 were reckoned as successful, while 1,934 were so markedly successful as to be prize-winners. During 1880 thirteen gold, forty-three silver, and seventy-three bronze medals were awarded in these schools, besides one hundred and fifty-four book prizes. The winners of the gold medals, we may mention, were South Kensington, St. Martin's, London: Westminster, Dover, Edinburgh, Lambeth, Bradford Grammar-school, Brighton, Cirencester, and Coalbrookdale; the first taking three of these, and Bradford two.

The following list of the art schools of the country in connection with the Science and Art Department must not fail to find a place in our record of progress made. We give at the same time the date of their establishment, and the number of students receiving instruction during 1880 for each school.

School	Date of establishment	Number of students taught in 1880
Aberdeen	1853	295
Andover	1854	78
Barnsley	1874	134
Barnstaple	1877	95
Barrow-in-Furness	1874	144
Bath	1854	193
Belfast	1870	404
Berwick-on-Tweed	1873	71
Bideford	1875	72
Birkenhead	1855	230
Birmingham	1842	625
With branches at—		
Jenkins Street Board School	1879	48
Moseley Road School	1876	123
Osler Street School	1876	80
Smith Street School	1876	144
King Edward's School	1876	294
Bristol Street School	1878	119

School	Date of establishment	Number of students taught in 1880
Bolton	1876	330
Boston	1860	91
Bradford, Mechanics' Institute	1871	284
„ Grammar School	1874	225
„ Church Institute	1874	178
Bridport	1865	104
Brighton	1859	462
Bristol	1853	341
Bromley (Kent)	1878	113
Bromsgrove	1860	85
Burnley	1879	179
Burslem	1869	196
Cambridge	1858	106
Cardiff	1868	168
Carlisle	1855	154
Carnarvon	1853	50
Cheltenham	1853	138
Chester	1853	98
Chesterfield	1879	145
Cirencester	1860	112
Clonmel	1854	62
Coalbrookdale	1856	75
With branch at Dawley	1876	10
Cork	1854	265
Coventry	1844	228
Croydon	1868	137
Darlington	1857	131
Derby	1870	393
Devizes	1864	65
With branch at Town Hall	1878	22
Devonport	1875	146
Dollar	1875	130
Doncaster	1877	75
Dorchester	1867	80
Dover	1870	225
Dublin Metropolitan	1849	399
Dublin Queen's Institute	1869	110
Dudley	1853	145
Dumfries	1874	198
Dundee	1856	743

School	Date of establishment	Number of students taught in 1880
Durham	1853	221
Edinburgh (Male)	1858	507
Edinburgh (Female)	1858	334
Elgin	1876	60
Exeter	1854	229
Falkirk	1878	89
Farnham	1872	72
Frome	1865	60
Glasgow	1845	892
Gloucester	1859	233
Halifax	1859	130
Hanley	1847	253
Hartlepool (West)	1874	108
Hastings and St. Leonards	1875	242
Huddersfield	1872	172
Hull	1861	244
Inverness	1865	88
Ipswich	1858	213
Keighley	1870	154
Kendal	1870	80
Keswick	1877	52
Kidderminster	1862	211
Kilmarnock	1867	134
Lancaster	1856	197
Leamington	1870	140
Leeds	1847	655
Leicester	1870	296
Lewes	1868	100
Limerick	1852	120
Lincoln	1863	157
Liskeard	1879	46
Liverpool, South District, Mount Street	1855	391
Liverpool, North District, Liverpool College	1855	384
Londonderry	1875	81
Macclesfield	1851	186
Manchester, Royal Institute	1842	377
Manchester, Grammar School	1869	928
Manchester, Longsight Mechanics' Inst.	1878	56
Mansfield	1876	42

School	Date of establishment	Number of students taught in 1880
Metropolitan:—		
Bloomsbury	1842	223
City and Spitalfields	1842	139
Islington	1873	101
Lambeth	1854	
With branch at Kennington Park Road	—	732
North London	1868	281
St. Martin's	1854	198
St. Thomas' Charterhouse	1853	194
South Kensington	1854	824
Stratford	1872	164
West London	1862	570
Westminster	1876	137
Middlesborough	1873	75
Morpeth	1878	46
Newcastle-under-Lyme	1853	302
Newcastle-on-Tyne, Corporation Street	1878	306
Newcastle-on-Tyne, Library Place	1844	219
Newport (Mon.)	1875	100
Northampton	1871	200
Norwich	1846	169
Nottingham	1843	516
Oxford	1865	125
Paisley	1846	60
Penzance	1853	120
Perth	1863	206
Plymouth, Courtenay Street	1876	190
Plymouth, Young Men's Christian Assoc.	1879	53
Portsmouth	1870	277
Preston	1860	121
Reading	1860	150
Redditch	1872	96
Rotherham	1874	67
Ryde	1871	142
Salisbury	1865	124
Selby	1872	67
Sheffield	1843	313
Shipley	1871	214
Shrewsbury	1855	145

School	Date of establishment	Number of students taught in 1880
Sleaford	1879	63
Southampton, Hartley Institute	1855	126
Southampton, Philharmonic Hall	1872	198
Stafford	1873	100
Stirling	1857	179
Stoke-on-Trent	1847	135
Stourbridge	1852	116
Stroud	1860	141
Sunderland	1869	186
Swansea	1853	130
Taunton	1856	67
Tavistock	1854	89
Torquay	1879	136
Trowbridge	1864	35
Truro	1853	62
Wakefield	1868	146
Walsall	1871	46
Warminster	1861	65
Warrington	1853	180
Watford	1874	89
Weymouth	1877	109
Winchester	1870	138
Wolverhampton	1854	163
Worcester	1851	154
Yarmouth, Great	1857	115
York	1842	114

The total number of students receiving instruction in the hundred and fifty-one schools and nine branches is over thirty thousand, paying in fees for instruction over thirty-six thousand pounds. This, it will be seen, is a little over twenty shillings a year all round, but then it must be remembered that the students attending morning classes pay considerably more than do the artisans who form the main bulk of the evening students.

The Department during the year under consideration distributed as payment on satisfactory results a little over

17,000*l.*, in addition to the bestowal of prizes costing between 2,000*l.* and 3,000*l.*

A school of art must, according to the regulations of the Department, be held in rooms exclusively devoted to it, but in many localities, where this is not practicable, the more humble 'art class' is held in any available room, as a school-room or mechanics' institute. During the year 632 of these classes have been in operation, and over twenty-six thousand students have been receiving instruction in them.

Another phase of the work of the Department is seen in the examination in drawing of the teachers, pupil teachers, and students in our training colleges for masters and mistresses, such as those of the National Society, the British and Foreign School Society, and various Diocesan, Wesleyan, Roman Catholic, and Free Church Institutions. Forty-eight of these examinations were held during 1880. 3,568 students, and 1,087 teachers and pupil teachers were examined for prizes and certificates, and over 1,000*l.* paid away for the cost of these prizes and general payments on satisfactory results.

The total number of persons who received instruction in art, some of it, as in the elementary schools, being of the most simple nature, and some, as in the schools of art, of the most advanced character, during 1880, from teachers holding drawing certificates granted by the Science and Art Department, was 837,308. The total for many years has been a continuously increasing one.

The following return shows the total amount of aid granted to schools and classes, on account of instruction in art and elementary drawing during the year 1880.

It at first sight appears from this table that some of the science figures have accidentally got mixed up with the art returns, but drawings illustrative of the science subjects, *building construction*, machine construction, and naval *architecture come* within the range of technical art, and are

—	Direct payments			Aid towards cost of examples and fittings			Cost of prizes			Total aid		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Elementary day schools . .	43,203	1	8	505	0	9	5,245	1	2	48,953	3	7
Training colleges under inspection . .	1,342	10	0	11	5	9	388	12	2	1,742	7	11
Art classes .	6,119	10	8	121	15	8	985	5	11	7,226	12	3
Works of Science classes . .	1,751	4	6	—			195	19	2	1,947	3	8
Schools of art .	17,091	9	11	454	0	4	2,865	0	6	20,410	10	9
Students in training and National Scholars at South Kensington . .	2,862	11	8	—			—			2,862	11	8
Schools not entitled to receive payments on results .	—			—			140	7	7	140	7	7
Grand totals for 1880 . .	72,370	8	5	1,092	2	6	9,820	6	6	83,282	17	5

reckoned in with the other drawings.[1] The prizes vary from a small drawing-board &c., for elementary work, to gold

[1] The following extract from the instructions compiled for candidates for building construction indicates the necessity of a certain amount of drawing power :—

He should be able to draw, from given dimensions, single, double, and framed floors, with or without ceilings beneath them; showing modes of supporting, stiffening, and framing the timbers, trimming round hearths and wells of stairs; also floor coverings of boards or battens, rebated and filleted, ploughed and tongued, and laid folding, with straight or broken joints, bevelled or square heading joints.

He should be able to draw in elevation, from given dimensions, a framed partition with door-openings.

He should be able to draw in elevation, and give vertical and horizontal sections of solid door frames and window frames.

He should be able to describe, by drawings, beadings of different kinds, dovetailing, cross-grooving, rebating, plough-grooving, chamfering, rounded nosing, and housings.

He should be able to draw in elevation, and give vertical and horizontal sections of, the following doors, viz., ledged, ledged and braced,

medals and valuable books on art. The first grade prizes are over 40,000, and the second and higher grades of awards added to these make a grand total for the year of 51,072 distinct recognitions of success.

It is sufficiently evident that all these multifarious agencies cannot go on without a very considerable expenditure. We have seen that in 1852 the grant was 15,000*l.*, but now we find administration alone figuring at over 13,000*l.* Schools of science and art take over 158,000*l.*, and other heavy sums are necessitated by the reproduction of works of art, art-library, the expenses of the South Kensington and Bethnal Green Museums, and so forth. We may perhaps still better illustrate the growth of art-teaching in England within the memory of many of us, if we isolate some few facts from their surroundings in the various reports and blue books, taking Manchester as our illustrative example.

The first meeting in Manchester to promote a school of design was held in 1838. A Mr. Thomson, who had been M.P. for the city from 1833 to 1837, held a post in connection with the Board of Trade, so that the question of English superiority or the reverse in design was one familiar to him, and he was one of the prime movers in the idea of establishing a school in the city of which he was the representative. At the meeting only one calico-printer was present or took any interest in the matter, though the original idea was to benefit calico-manufacturers. The objects of the meeting were stated in a widely circulated address, of a perhaps somewhat high-flown character. It ran as follows—

framed and braced, panelled, and the mode of putting them together, position of hinges and furniture; as well as to describe, by drawing, the following terms as applied to panelled doors, viz., square and flat, bead butt, bead flush, moulded, all on one or both sides.

He should be able to draw in elevation, and to give vertical and horizontal sections of the following window sashes and frames, viz., single or double hung sashes with square, bevelled, or moulded bars, *and cased frames; casement* sashes hung to solid frames, with method *of hanging and securing* in each case.

The diffusion of knowledge, in whatever department of science it takes place, is a subject of great interest to every lover of public improvement; and the formation of a school of design in the town of Manchester must tend to its commercial as well as classical prosperity, and must also prove beneficial to the inhabitants of the surrounding towns. Manchester, as the great emporium of human industry and production, creates within herself a considerable demand for the decorative and ornamental departments of design in the operations of calico-printing, fancy weaving, and embroidery. Individuals employed in these branches of art require an institution for the improvement of taste and the encouragement of harmonious conceptions of beauty in form. Such an institution is equally requisite for students in civil engineering, to whom precision of design, and the skilful use of instruments in surveying, planning, &c., are essentially necessary in their professional pursuits. It has been well remarked by the Baron Charles Dupin, in his advice to manufacturers and the foremen of workshops, that the only efficient means to encounter opposition is to manufacture goods really better than our competitors. Superiority in manufactures depends, in a great measure, on the fortunate exercise of taste, economy, industry, and invention. The establishment of a school of design in Manchester is recommended, in order to enhance the value of manufactures in this district, to improve the taste of the rising generation, to infuse into the public mind a desire of symmetry of form and elegance of design, and to educate for the public service a highly intelligent class of artists and civil engineers.

The objects of tuition were stated to be 'instruction in drawing from the round, in drawing applicable to manufactures, and calico-printing in particular.' The school occupied free quarters in one of the institutions of the town, but the attendance was very scanty and the annual subscriptions and donations very poor in amount. Trade jealousies further cramped the efficiency of the institution, and manufacturers spending over 2,000*l.* a year for French designs gave a grudged two or three guineas per annum to the local schools. The accounts are before us as we write, and we find that during the

and modelling include architectural and other ornament, flowers, objects of still-life, &c., etching, the figure from the antique and the life, and the study of anatomy as applicable to art.

These courses of instruction are equally open to the public on the payment of fees. The classes for male and female students meet separately. The fees are as follows :—

Fees for classes studying five whole days including evenings :—

5*l.* for five months, and an entrance fee of 10*s.*

Evening classes.	Male School.	2*l.* per term.
	Female School.	1*l.* per term, three evenings a week.

Schoolmasters, schoolmistresses, and pupil teachers of public elementary schools may attend on any two evenings in each week. Fee 5*s.* for the term. Governesses in private schools or families may attend the day classes for not more than three months on payment of 1*l.* per month, without payment of the entrance fee. An evening artisan class is held in the elementary room, fees 10*s.* per term or 3*s.* per month. Students of this class may pass into the general class rooms at the same fee when they have passed examinations in the four subjects of second-grade drawing.

No students can be admitted to these classes until they have passed an examination in freehand drawing of the second grade. Examinations of candidates for admission will be held weekly at the commencement of each term, and at frequent intervals throughout the year. Candidates who have already passed an examination in second-grade freehand drawing are admitted on application to the registrar without further examination.

During the year 1880 40 students were in training for *masterships*, and in addition to these there were in the *schools 824* ordinary students, 448 being in the female

school and 376 in the male.[1] The course of instruction consists of the following twenty-three stages, but it should be understood that the course is not progressive in the order in which the stages are named.

STAGE 1.—*Linear drawing by means of instruments.*

(*a*) Linear geometry. (*b*) Mechanical and machine drawing from examples or black-board demonstrations. (*c*) Linear perspective. (*d*) Details of architecture from copies.

STAGE 2.—*Freehand outline drawing of rigid forms from flat examples or copies.*

(*a*) Objects. (*b*) Ornament (showing elementary principles of design).

STAGE 3.—*Freehand outline drawing from the 'round.'*

(*a*) Models and objects. (*b*) Ornament.

STAGE 4.—*Shading from flat examples or copies.*

(*a*) Models and objects. (*b*) Ornament.

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[1] The new buildings, which came into use on October 5, 1863, are the first *permanent* buildings which have been provided for the national art training schools. The buildings heretofore occupied by the art classes have all been of a temporary kind. In the first instance, in 1837, when the School of Design was instituted, the classes were held in rooms on a second floor in Somerset House, once occupied by the Royal Academy, and now by the Office for the Registration of Births, Marriages, and Deaths. Next the classes met, in 1852, in Marlborough House, where the Queen, at the intervention of His Royal Highness the Prince Consort, graciously permitted a training school for teachers for the schools of art throughout the country to be first established. Then in wooden buildings at South Kensington, to which place the training schools were removed in 1856.

The present brick buildings are of a plain but substantial fireproof character, and provide for all the special requirements of an art school which the experience of a quarter of a century has shown to be necessary, in respect of lighting by day and night, as well as ventilation, heating, &c. A distinct series of rooms has been provided for male and female classes; those for males being on the second and those for females on the first storey. In each series separate rooms are assigned for drawing, painting, and modelling, &c., and there is a lecture-room *in common* for the male and female classes.

STAGE 5.—*Shading from the 'round' or solid forms.*

(*a*) Models and objects. (*b*) Ornament. (*c*) Time-sketching and sketching from memory.

STAGE 6.—*Drawing the human figure and animal forms from copies.*

(*a*) In outline. (*b*) Shaded.

STAGE 7.—*Drawing flowers, foliage, and objects of natural history, from flat examples or copies.*

(*a*) In outline. (*b*) Shaded.

STAGE 8.—*Drawing the human figure or animal forms from the 'round' or nature.*

(*a*) In outline from casts. (b^1) Shaded (details). (b^2) Shaded (whole figures). (c^1) Studies of heads from the life. (c^2) Studies of the human figure from nude model. (*d*) Studies of the human figure, draped. (*e*) Time sketching and sketching from memory.

STAGE 9.—*Anatomical studies.*

(*a*) Of the human figure. (*b*) Of animal forms. (*c*) Of either, modelled.

STAGE 10.—*Drawing flowers, foliage, landscape details, and objects of natural history, from nature.*

(*a*) In outline. (*b*) Shaded.

STAGE 11.—*Painting ornament from flat examples.*

Either in water-colour, tempera, or oil { (*a*) In monochrome. (*b*) In colours.

STAGE 12.—*Painting ornament from the cast, &c.*

(*a*) In monochrome, either in water-colour, oil, or tempera.

STAGE 13.—*Painting (general) from flat examples or copies, flowers, still-life, &c.*

(*a*) *Flowers* or natural objects, in water-colour, in oil, or in tempera. (*b*) Landscapes or views of buildings.

STAGE 14.—*Painting (general) direct from nature.*

(*a*) Flowers, or still-life, in water-colour, oil, or tempera *without backgrounds.* (*b*) Landscapes or views of buildings.

STAGE 15.—*Painting from nature groups of still-life, flowers, &c., as compositions of colour.*

(*a*) In oil-colour. (*b*) In water-colour or tempera.

STAGE 16.—*Painting the human figure or animals in monochrome from casts.*

(*a*) In oil, water-colour, or tempera.

STAGE 17.—*Painting the human figure or animals in colour.*

(*a*) From the flat or copies. (*b*) From nature, nude or draped. (*c*) Time-sketches.

STAGE 18.—*Modelling ornament.*

(*a*) Elementary, from casts. (*b*) Advanced, from casts. (*c*) From drawings. (*d*) Time sketches from examples and from memory.

STAGE 19.—*Modelling the human figure or animals.*

(*a*) Elementary, from casts of hands, feet, masks, &c. (*b*) Advanced, from casts or solid examples. (*c*) From drawings. (*d*) From nature, nude or draped.

STAGE 20.—*Modelling fruits, flowers, foliage, and objects of natural history, from nature.*

STAGE 21.—*Time-sketches in clay of the human figure, or animals from nature.*

STAGE 22.—*Elementary design.*

(*a*) Studies treating natural objects ornamentally. (*b*) Ornamental arrangements to fill given spaces in monochrome or modelled. (*c*) Ornamental arrangements to fill given spaces in colour. (*d*) Studies of historic styles of ornament drawn or modelled.

STAGE 23.—*Applied designs, technical or miscellaneous studies.*

(*a*) Machine and mechanical drawing, plan drawing, mapping, and surveys, done from measurement of actual machines, buildings, &c. (*b*) Architectural design. (*c*) Ornamental

design, as applied to decorative or industrial art. (*d*) Figure composition, an ornamental design with figures, as applied to decorative or industrial art. (*e*) The same as 23*c*, but in relief. (*f*) The same as 23*d*, but in relief.

This list will be found tolerably exhaustive. Those who are going in for masterships take the various subjects in groups. Thus Group I., elementary drawing, colouring, and design, requires stages 1, 2, 8*a*, 10*a*, 14, 22*a*, 22*b*, and 22*c*, to be taken up. Other stages enter into Groups II., III., IV., V., and VI. In each of these groups the necessary drawings have to be made and examinations passed, so that a master holding certificates of having passed some three or four of these groups is fully equipped for his class. The three following examination papers will suffice to illustrate the searching character of the training.

HISTORIC ORNAMENT.

Candidates must answer correctly at least two questions of Sections I. and III., and three of Sections II. and IV., to receive the highest distinction. Preference will be given to papers in which the answers are accompanied by illustrations of the different styles.

I.—*Prehistoric Ornament.*

(1) What were the principal periods of prehistoric art? (2) Define the terms symmetry, eurithmy, proportion, and expression. (3) State the progressive phases in the construction of lake dwellings, and illustrate your answer with sketches. (4) What were the characteristics of the monumental works of construction and ornamentation in the north, the centre, and the south of the Western Hemisphere?

II.—*Ancient and Classic Art.*

(1) What are the principles of Chinese ornamentation in the conventional treatment of flowers and animals; in what branches of art are the Chinese most deficient, and why? (2) Give the characteristic differences between the Dravidian, Bengalee, and Chalukyan styles of architecture and ornamentation. (3) Describe the pronaos, naos, adytum, posticum, and

opisthodomus of a Greek temple, and illustrate by plan. (4) Give the six subdivisions of the Doric, the three subdivisions of the Ionic, and the four subdivisions of the Corinthian orders of Greek architecture. (5) What were the principal periods of plastic art in Greece, and name the most distinguished sculptors of each, and their distinguishing characteristics? (6) Describe the Parthenon of Athens and the Colosseum of Rome, and state in general the difference between Greek and Roman architecture and sculpture, painting and ornamentation.

III.—*Mediæval Art.*

(1) Describe the Catacombs, and the wall decorations generally found in them. (2) Enumerate the most important symbols used in early Christian art for decorative purposes. (3) What are the differences between the Byzantine and Romanesque styles of architecture and ornamentation? (4) Describe the Mosque of Cordova, and state the differences between the Mahometan styles of decoration in Egypt, Spain, Persia, and India. (5) What influence had Dante and scholasticism on the ornamentation of Gothic churches? (6) Classify the development of Gothic architecture according to the changes made in the triangles which served as the bases of the pointed arches. (7) What were the characteristics in the development of Gothic architecture in France, England, Germany, Spain, and Italy? (8) Describe the Cathedral at Canterbury.

IV.—*Modern Art.*

(1) What were the principal causes of the development of modern art? (2) What are arabesques, and their characteristic principles in ornamental art? (3) Classify the Renaissance in Italy, France, and England. (4) What are mosaics and frescoes? (5) What are the distinguishing characteristics of Leonardo da Vinci, Raphael, Michael Angelo, Titian, Correggio, Albert Durer, Peter Paul Rubens, and Hogarth? (6) State the difference between the principles of antique and modern art. (7) When and where did the Rococo style originate, and what are its characteristics? (8) Who were the principal English, French, and German writers on æsthetics?

Three hours allowed for this paper.

PAINTING.

(1) Give an account of the following colours, their chemical constituents, and their durability or otherwise: Naples yellow, patent yellow, orange orpiment, cadmium, gamboge, brown pink, vandyk brown, cobalt green, malachite green. (2) Describe the usual Italian method of finishing pictures which were commenced in tempera during the fourteenth century, and give examples. (3) How were panels prepared for painting on as described by Cennini? Were similar grounds used at a later period? Did Rubens ever adopt them? (4) Describe the distinguishing differences in aim, style, and methods of execution between the Florentine, Venetian, and Bolognese schools of art. (5) What is the 'intonaco' of a fresco? What its ingredients? Is lime to be used while fresh or otherwise? Describe a day's work in fresco painting: 1. The surface and its condition. 2. The colours to be used. 3. The conditions to be observed to ensure adhesion. (6) Was wax ever used as a vehicle in painting, and with what results as to durability? (7) Describe the oils used for painting in the middle ages, their preparation for painting, and the various ingredients mixed with them for making varnishes. (8) Who was Fra Bartolomeo? What were his technical processes in painting? Who were his friends or followers? (9) Give the names of some of the principal painters of the early Florentine school. (10) Who was Andrea Verocchio? Who were his principal pupils? (11) What is 'azzuro della magna?'

Two hours allowed for this paper.

BOTANY.

(1) What do the following terms mean: spathaceous, staminiferous, racemose, anther, amentum, tuber? (2) Draw a square having its sides parallel to the edge of your paper, and make each side about six inches long. Fill this with appropriate floral ornament for a flooring tile, and state what plant you employ. (3) What do the terms venation and vernation mean? (4) Mention and illustrate by rough sketches some of *the various forms* of leaves. (5) What do you understand by *the following* descriptive specific terms: gracilis, palustris,

pedunculata, album, nutans, repens, major, reticulata, noctiflora? (6) Mention any plants employed symbolically, and explain the meaning of the symbolism. (7) Give the English and botanical names of one plant in each of the following genera: Papaver, Ranunculus, Campanula, Rosa. (8) Give three examples of plants having blue, pink, yellow, white, and purple flowers respectively. (9) If called on for floral designs illustrative of the moorland, river-side, forest, and the hedge-row, what plants would you consider appropriate? (10) The corollas of flowers are monopetalous, stellate, campanulate, bilabiate, gibbous: explain these terms, and give one natural example of each. (11) Mention some of the various forms of fruit and refer to any instances of their decorative use. (12) What degree of influence would you give botanical science in its relation to decorative art? (13) Why does an orange when peeled divide readily into segments while an apple or cherry do not? (14) Give botanical details, names, season of flowering, locality where found, and any other points that may occur to you of any six common wild flowers.

Three hours allowed for this paper.

The course of instruction in the other schools of art throughout the country is very similar, though of course the special needs of a locality will often throw particular sections of work into a more marked prominence.

Enormous numbers of drawings are sent up annually for examination to Kensington; the best of these enter into a national competition between the works of all the schools of art in the kingdom for medals and book prizes. Twelve gold medals and a larger number of silver and bronze medals are awarded, besides book prizes. One gold medal is awarded for the best drawing from the living model, another for the best study from the antique, and so on, a special subject attaching to each medal. It will readily be seen how great a stimulus is here offered to exertion, how high a reward attends success. In 1880 the various schools sent up over 170,000 drawings, of these 989 were selected for the national competition. In 1881 the prize works had to

be selected from over 190,000 drawings sent up. The two female students who take the highest prizes of the year receive in addition 'Princess of Wales' scholarships.

In many schools of art a local prize-list is often started, in some cases we have known as much as 100*l.* subscribed for this purpose. At Nottingham the mayor gives annually a silver medal for the best design for lace, and many other such additional incentives to success might readily be brought forward. One of the greatest of these is in connection with one of the leading metropolitan schools, and is known as the 'Mence Smith Travelling Studentship.'

Every competitor must comply with the following conditions:—

He must have been a student in the 'West London School of Art' for at least six months previous to the date appointed for the competition.

He must submit the following works:—

(A) A set of designs for the coloured decoration of some object or space, to be specified beforehand: portions of the detail to be drawn and coloured full size.

(B) Two studies from the living human figure, in black and white, or in colour, at his option: one to be a finished study, the other a 'time-sketch.'

All the above must be executed in the school.

(C) In addition.—One coloured sketch from a selected existing work at Kensington or elsewhere. A choice of subjects to be published the day previous to the commencement of the sketches: a limited time to be allowed for their execution.

The award is to be made by a jury of three, to be appointed by the committee of the school. Of these three, one at least is to be a liveryman of the Painters' Company (who, if on the committee of the school, shall not thereby be precluded); and *the others shall* be members of the committee.

Within one month of the award, the successful competitor

is to inform the Secretary through the head master, whether he is prepared to spend two months abroad; and whether he will visit Italy, for at least one month of that time. He is to state whether he elects to go in the spring or autumn.

He will be required to make during his sojourn abroad sketches and written notes of works of coloured decoration, and to submit them to the committee, who only undertake to pay the promised amount on being satisfied that he has well used his opportunities.

Should the successful competitor elect to visit Paris, or such parts of the Continent on this side the Alps as may be appointed by the committee, satisfactorily fulfilling the conditions laid down, he will receive, in all, forty pounds. But should he elect to undertake the journey to Italy, and perform the same also satisfactorily, in accordance with the committee's requirements, the amount will be increased by 10*l.*, making the total sum of fifty pounds.

The committee may require the successful competitor to forward to them his sketches, written notes, or other evidences of his industry during his absence: and in any case the whole of such drawings and notes are to be submitted to the committee within a fortnight of his return.

He is, after his return, to attend the evening classes of the school for at least six months, and during that time to undertake such studies as the head master may direct. He shall be free to attend any of the classes of the school for one year without charge.

No award will be made unless the works submitted be of sufficient merit.[1]

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[1] The Architectural Association a year or so ago arranged for a number of their members and friends to make a tour in Lombardy during the autumn. Visits were paid to Turin, Milan, Bergamo, Brescia, Cremona, Mantua, Pavia, and other places notable for objects of architectural interest. Accompanying the party were three or four distinguished art-students who, being in training at the National Art Schools, South Kensington, were selected by the Lords of the Committee of Council to undertake this journey as a part of their course of instruction. The distinction thus conferred upon them is valuable in laying the foundation of a system of travelling scholarships of art-students analogous to that which has existed for some time in France in connection with the Grand Prix de Rome.

Vacation work, too, is often very rightly encouraged. In a circular before us of one of the schools we see amongst prizes for holiday work, two guineas for the best pencil or chalk drawing of some large plant, as hemlock, Indian corn, hollyhock, or the like. Another prize of equal value is given for the best study of an animal, another for the best water-colour drawing of landscape, a fourth for the best model in clay illustrating 'wounded,' and so forth.

In enumerating the advantages open to students in our Government schools of art, we must not omit to include the South Kensington Museum and art library. It may at first seem to the reader that such essentially metropolitan institutions can be of little or no service to those who are not Londoners; but not only can the provincial students, thanks to modern facilities of locomotion, visit them, but the reverse process also is largely adopted, great quantities of pictures, reproductions, art objects, books, &c., being continually circulated through the country schools. In 1880 over five thousand paintings and drawings were so lent, and over four thousand other objects. A curious illustration of the accessibility of the museum to almost everybody, thanks to the facilities of locomotion of which we have spoken, may be seen in the following test. The visitors during two months of the year 1859 were invited to give their names and addresses. 1,530 persons during one of these months were willing to supply the needful information, and on examination the results were found to be that 71 were foreigners and 402 were from the provinces. Of the Londoners 114 were living within a mile of the museum, 156 within two miles, 203 within three miles, 205 within four miles, 91 and 87 respectively between five and six miles, while 201 had come from metropolitan districts lying beyond the latter distance. In the other testing month 47 of the visitors were foreigners and 384 were from the country.

Not only is the advantage of seeing fine things in itself *an art education,* but the students are freely encouraged to

avail themselves more directly of the grand opportunities of study afforded. Millions of persons have passed through the galleries at South Kensington, and other millions are constantly visiting the local exhibitions it so freely aids, and surely amidst all these throngs a great and beneficial influence is being exerted. It may possibly be thought by some of our readers that the tempting roundness of the sums may have led us to some exaggeration, but we have really fallen far short of conveying all that figures might legitimately convey. In one year alone, 1880, the museums under the superintendence of the Department in London, Dublin, and Edinburgh were visited by 2,332,443 persons, and at South Kensington alone the visitors were over nine hundred and eighty thousand, while local exhibitions aided by the Department were visited by over six hundred thousand more, making a grand total for the year of over three millions of people brought within the influence of artistic and beautiful things.

Any person, whether a student of any art school or not, may at any time when the museum is open, sketch or make notes of any objects in the collections, with the following exceptions :—

The Paintings in Water-colours, to copy which no permission is granted.

Objects on Loan can only be copied on the production of the written permission of the owners, which will be retained by the Department.

Pictures in the Sheepshanks' Gallery, to copy which special permission must be obtained, in accordance with the following conditions :—

1. Forms of application for permission to copy are supplied by the attendant in the gallery, or will be sent in reply to a letter addressed to the Director, South Kensington Museum, London, S.W. These forms, properly filled up and given to the attendant, or addressed to the Director, as above, will receive immediate attention. 2. No application to copy the

works of any living artist can be entertained unless it be accompanied by the *written* permission of such artist. 3. Such permission will only allow of works being copied by means of water-colours, or on porcelain, or by drawing or engraving, copying in oil not being permitted. 4. Applicants must, if required, send specimens of their competency. 5. No copying can be permitted except on the days devoted to study; and not more than four persons can be admitted at the same time to work in any apartment. 6. No work can be removed from the walls for the purpose of copying.

These restrictions are all of them, it will readily be seen, of a wholesome character.

The art library numbers some sixteen thousand volumes, and about twice as many prints and photographs. The objects of the library are primarily for the use of the schools of art, and secondly for any of the general public who care to pay the very small fee that is demanded of them for the privilege. All certificated teachers of the Department, all students who have passed the second-grade examination or gained medals, and also the students of the Royal Academy, have free admission. The library is growing at the rate of some thousands of purchases and donations every year. The average daily attendance of readers is eighty-seven.

THE ROYAL ACADEMY.—The popular idea in connection with this institution is that it is a fashionable resort, an annual collection of pictures that must be 'done' by anyone claiming any social position, or of any pretensions to taste, and this idea has at least the advantage of placing it in possession of large funds,[1] and thus enables it to carry out liberally its less known work as a great art school. The schools of the Royal Academy have been in existence from its commencement and formed a definite feature in the plans of its founders. In 1768 several artists of reputation,

[1] *In three following years we find the receipts for admission to the Exhibition were 10,900l. 16s., 10,358l. 2s., and 9,068l. 1s.*

desirous of banding themselves together into an art association, presented the following memorial to the King :—

'We, your Majesty's most faithful subjects, painters, sculptors, and architects of this metropolis, being desirous of establishing a Society for promoting the arts of design, and sensible how ineffectual every establishment of that nature must be without the Royal influence, most humbly beg leave to solicit your Majesty's gracious assistance, patronage, and protection, in carrying this useful plan into execution.

'It would be intruding too much upon your Majesty's time to offer a minute detail of our plan. We only beg leave to inform your Majesty that the two principal objects we have in view are, the establishing a well-regulated school or academy of design for the use of students in the arts, and an annual Exhibition, open to all artists of distinguished merit, where they may offer their performances to public inspection, and acquire that degree of reputation and encouragement which they shall be deemed to deserve.

'We apprehend that the profits arising from the last of these institutions will fully answer all the expenses of the first; we even flatter ourselves they will be more than necessary for that purpose, and that we shall be enabled to distribute annually somewhat in useful charities.

'Your Majesty's avowed patronage and protection is therefore all that we at present humbly sue for; but should we be disappointed in our expectations, and find that the profits of the Society are insufficient to meet its expenses, we humbly hope that your Majesty will not deem that expense ill applied which may be found necessary to support so useful an institution.'

This memorial was signed by Benjamin West, Richard Wilson, and several other well-known names, including Mary Moser and Angelica Kauffman. The King received the idea very graciously, saying that he considered the culture of the arts as a national concern, and that the memorialists might fully rely upon his assistance in carrying the plan into execu-

tion. A detailed plan was then drawn up, and on December 10, 1768, laid before the King, and received the Royal signature. Into these details, interesting as they are, it would be foreign to our present scope to go, except so far as they affect the teaching side of the question. Here we find full provision made for the admission of students, the appointment of professors, and so forth. Casts, models, a library, a teaching staff, prizes, and all other requisites are to be liberally provided, and at the free service of all who are qualified to derive advantage from them. We find that his Majesty George III. had to contribute a little over 5,000*l.* from his privy purse during the first eleven years, but ever after this the institution has been amply self-supporting. It has spent in all considerably over 200,000*l.* on its schools,[1] and has distributed in pensions and donations to distressed and superannuated artists and their families over 70,000*l.*

The schools were opened within a month of the foundation of the Academy, seventy-seven students, amongst them Bacon, Cosway, and Flaxman, being admitted in the first year, and from that day to this the great benefits of the school have been freely open to all competent to avail themselves of them. In the first ten years three hundred and forty students were admitted, and the stream has ever since been steadily flowing on to the present time. From the January of 1769 to December of 1880, 3,699 students have been entered on the register. Of late years the number of students has been considerably increasing, involving an annual expenditure of more than 4,000*l.*

Candidates for admission are required to submit certain drawings or other works. A painter has to produce a finished drawing in chalk of an undraped antique statue. He must also send in two drawings of an anatomised figure, one showing the skeleton and the other the superficial layer of muscles, the names of the various parts being correctly

[1] *For books,* medals, casts, pictures, and the fees of the professors, *all being absolutely* gratuitous to the students.

given. From the sculptor-student similar anatomical drawings are required, together with a model, either in the round or in relief, of an undraped antique statue, while would-be architects must send in plan, elevation, and section of some existing building, an original perspective sketch of some real building, and a drawing of a piece of architectural sculpture either from an original source or a cast. They must also fill up a certificate that includes amongst other things a declaration of their desire to pursue art as a profession. These drawings and models are received by the authorities twice a year. The candidates whose works satisfy the Council are now admitted to a second stage in their art-career, and become what are termed probationers. The probationary stage lasts two months in the case of painters and sculptors, and six months for the architects. During this time the probationers must attend the schools and produce afresh drawings or models of a similar character to those first sent in. This probationary period is a test of the genuineness of the previous work, and prevents anyone obtaining admission by submitting drawings not wholly his own. Should these second drawings prove as satisfactory as the first, the third stage of the career of the candidate is reached, and he enters at once on the full privileges of a student. In the earlier years of the Academy this studentship lasted for ten years, but in 1853 this was reduced to seven, and in 1881 to six. The present period of six years is now subdivided into two periods of three years each. At the end of the first three years the student will be required to submit certain works for examination, and the Council will then determine whether the arrangement shall then terminate or the second period of three years be entered upon. This is at once an incentive to zeal for the student and a means to the Academy of satisfying itself that the advantages provided are not thrown away. Where the studentship is bearing fruit the full period is granted, while the idle or incapable must make room for the gifted and the industrious.

The schools are as freely open to the one sex as the other, and with the exception that the female students do not draw from the nude figure, they have the same advantages and privileges. In a list before us of a year's prize-winners we find that five of the medallists bear Christian names of a distinctly feminine character, out of a total of twenty-one successful competitors. The equal rights of the two sexes arose in the first place by misadventure. All candidates are required to fill in a form giving name, age, residence, and so on, and in 1860 a young lady sent in the necessary drawings but only gave her initials instead of her Christian name in full. By this means the drawings passed in with the others, and it was only when they had been duly accepted that the Council became conscious of the position. A reference to the original charter of the body showed that there was no law barring the entrance of female students, and since then they have taken their full share of the advantages open to them. We do not give the name of the young lady who, consciously or unconsciously, thus brought matters to a crisis, but all upholders of 'women's rights' should search it out from the archives of the Academy and emblazon it as a victory on their banner.

All students commence their career in the antique school, and after making sufficiently good drawings of certain test figures pass into the preliminary painting school and the life school. There is also an upper painting school, a modelling school, and an architectural school. In all these the students are required to have arrived at a certain point of proficiency ere the third year of their studentship has expired or they have no chance of passing the mid-term examination.

The teaching staff includes visitors, curators, professors, and a keeper. As these technical names do not altogether carry their meanings on their faces we may dwell briefly on their duties. The continuous and more detailed teaching and the maintenance of discipline in each school is the duty

of the curator. These curators are not members of the Academy but teachers selected for their artistic and administrative powers to assist the visitors. Amongst the Academicians themselves some are annually elected to serve as visitors. Their duties are thus defined in the original charter. 'They shall be painters of history, able sculptors, or other persons properly qualified; their business shall be to attend the schools by rotation each month, to set the figures, to examine the performances of the students, to advise and instruct them, to endeavour to form their taste, and turn their attention towards that branch of the arts for which they shall seem to have the aptest disposition.' The general superintendence of the arrangements falls to the lot of the keeper; he too must be an Academician.[1]

The professorships are limited to a period of five years, though those holding them may be re-elected. They are of painting, sculpture, anatomy, architecture, and chemistry respectively. Each professor gives a course of lectures during the winter session, and attendance on these is compulsory on all students during the first three years of their studentship. The following syllabus of the lectures for the session 1880–81 will be read with interest. The dates show that the students are constantly kept drawing from these founts of knowledge.

1880.

CHEMISTRY—Arthur H. Church, Esq., M.A.

1. *Monday, Nov.* 1.—The Action of Pigments upon each other.

[1] 'He shall be an artist properly qualified to instruct the students: his business shall be to superintend the Academy, the models, pictures, casts, books, and other moveables belonging thereto: to attend regularly the antique academy, to give advice and instruction to the students, and be constantly at hand to preserve order and decorum. He shall, with the assistance of the visitor, provide the living models. He shall have convenient rooms allotted him in the Royal Academy, *where he shall* constantly reside.'

2. *Thursday, Nov.* 4.—The Action of Light, Heat, Moisture, and Air upon Pigments.

3. *Monday, Nov.* 8.—The Action of Light, Heat, Moisture, and Air upon Oils, Turpentine, and Resins.

4. *Thursday, Nov.* 11.—The changes to which Painting Grounds are liable.

5. *Monday, Nov.* 15.—The Chemical and Physical Changes involved in the several Processes of Painting.

6. *Thursday, Nov.* 18.—The Conservation and Restoration of Pictures.

ANATOMY—John Marshall, Esq., F.R.S.

1. *Monday, Nov.* 22.—The Skeleton of Man.
2. *Wednesday, Nov.* 24.—The Skeleton of Man.
3. *Friday, Nov.* 26.—The Skeleton of Man.
4. *Monday, Nov.* 29.—The Skeleton of the Horse.
5. *Wednesday, Dec.* 1.—The Superficial Muscles of Man.
6. *Friday, Dec.* 3.—The Superficial Muscles of Man.
7. *Wednesday, Dec.* 8.—The Superficial Muscles of Man.
8. *Monday, Dec.* 13.—The Superficial Muscles of Man.
9. *Wednesday, Dec.* 15.—The Superficial Muscles of the Horse.

Ladies can attend the Anatomical Lectures. The Demonstrations are for Gentlemen only.

1881.

DEMONSTRATIONS—John Marshall, Esq., F.R.S.

ON THE BONES, JOINTS, MUSCLES, FORMS, AND MOVEMENTS OF MAN.

1. *Monday, Jan.* 3.—The Foot and Leg.
2. *Wednesday, Jan.* 5.—The Knee and Thigh.
3. *Friday, Jan.* 7.—The Trunk.
4. *Monday, Jan.* 10.—The Trunk.
5. *Wednesday, Jan.* 12.—The Shoulder and Arm.
6. *Friday, Jan.* 14.—The Fore-arm and Hand.
7. *Monday, Jan.* 17.—The Neck, Head, and Face
8. *Wednesday, Jan.* 19.—The entire Figure.
9. *Friday, Jan.* 21.—The entire Figure.

PAINTING—Edward Armitage, Esq., R.A.

1. *Monday, Jan.* 24.—On the last Roman, Byzantine, and Romanesque periods of Art.
2. *Thursday, Jan.* 27.—The early Italian Masters of the 14th Century.
3. *Monday, Jan.* 31.—Italian Schools of the 15th Century.
4. *Thursday, Feb.* 3.—Italian Schools of the 15th Century—*continued.*
5. *Monday, Feb.* 7.—On Drawing Objects in Motion.
6. *Thursday, Feb.* 10.—On the Finish of Works of Art.

ARCHITECTURE—George E. Street, Esq., R.A.

1. *Monday, Feb.* 14.—The Study and Practice of the Art.
2. *Thursday, Feb.* 17.—The Principles of the Art.
3. *Monday, Feb.* 21.—The Development of Styles.
4. *Thursday, Feb.* 24.—Thirteenth Century Architecture—Italy.
5. *Monday, Feb.* 28.—Thirteenth Century Architecture—France.
6. *Thursday, March* 3.—Thirteenth Century Architecture—England.

The library contains a rapidly increasing collection of works of the highest art value; this, though primarily intended for the students, is open to any person duly qualified to make a proper use of it.

The drawings of the successful students are exhibited on the grand prize-giving day, and many persons avail themselves of the opportunity, but much greater good would doubtless result from a more extended exhibition. If instead of the brief and semi-private gathering of artists and critics, the works could be thrown open for a fortnight or so to public inspection, as is the case with the national competition drawings at South Kensington, great public interest would be created. On turning to the report of the Parliamentary Commission appointed to inquire, in the year 1863, into the position and working of the Academy, we find the following passage:—'That the works of the students should

be annually exhibited at such time of the year as might be considered most suitable, and that this exhibition of their works should be duly notified to the public.' Those of our readers who care to know more of the internal arrangements of the Royal Academy than at all enters within our limited scope, will find the minutes of evidence of that report a perfect mine of interest.

The whole of the teaching of the schools of the Royal Academy is of considerably higher character than the average teaching of the Government schools of art. In these latter we find the elements of art well taught to large numbers of students, and some of these advance to the highest class of work, the study of the antique and the life; but in the Academy elementary work finds no place. The student must have been elsewhere prepared, and in this respect the various local schools of art are of great value, as it is in these the candidate gets his grounding in art, and ultimately prepares the drawings he submits to the Council of the Royal Academy in token of his desire to pursue his studies still further. At the same time it is only just to say that in some of the larger schools of art the advanced students have great facilities for the study of the living model and as abundant opportunities for drawing from the antique.

It now only remains to refer to the various premiums held out to industry, at once the incentives to and the rewards for good work. Amongst these we find scholarships of 40*l.* and 50*l.* each, to be awarded for successful passing of certain examinations, travelling studentships, medal awards, and books. The travelling studentships are tenable for one year and are worth 200*l.*; the students who win the gold medals in painting, architecture, or sculpture, are in addition given this valuable opportunity of foreign study, the one success earning this great and double reward. A travelling architectural studentship for travel and study in England is also *awarded; this*, like the grander prize, is tenable for one year.

Its value is 60*l.* It is given in alternate years with the other.

Most of the greater prizes of the Academy are biennial, but several silver medals are given for work done in the intermediate years, and in order to encourage drawing from the life four prizes are annually awarded for the best sets of six drawings executed in the life school during the year. These prizes are of substantial pecuniary value, the first being 50*l.*, the second 25*l.*, the third 15*l.*, and the fourth 10*l.* The students in the sculpture school are not forgotten in the golden shower, two prizes of 30*l.* and 20*l.* each being given for the two best sets of three models of figures from the life executed during the year. The architectural students are in the same way allotted prizes of 25*l.* and 10*l.* for the best work done in the class. The prize list, liberal as it was before, was in 1881 revised and largely added to, at an additional cost of considerably over a thousand pounds a year.

A premium of the gold medal, with the Discourses of Sir Joshua Reynolds and other books, is given for the best historical picture in oil colours, being an original composition consisting of not less than three figures.

A similar award of gold medal and books is given for the best model of an historical bas-relief or alto-relief consisting of two or more figures, or of a group in the round.

A similar high reward, again, is given for the best architectural design, including one or more plans, an elevation, section, and perspective view.

The best landscape in oil colours receives a gold medal, called the Turner gold medal, from its illustrious founder, being a part of the munificent bequest of the great painter whose name it bears. Before Turner provided funds for this medal, landscape painting, the branch of art most pre-eminently English, and in which our native painters excelled over all continental schools, received scarcely any recognition

from the Academy, being treated as but an accessary to figure subjects. It was very natural, therefore, that the prince of landscape painters should desire to see the art by which he had thrown so bright a lustre over the whole English school occupying a recognised position in the Academy. The medal was designed by his friend Maclise, and forms not only a valuable prize, but is itself a beautiful work of art. Further homage again is paid to the memory of the great artist by the recent addition of a scholarship of 50*l.* to the Turner gold medal.

A relative of Creswick, another distinguished landscape painter, has also founded a prize to bear the artist's name. It is of the value of 30*l.*, and is awarded annually for a landscape in oil colour.

It is curious that up till the present time the Academy has given no encouragement either to animal painting or the practice of water-colour, though each of these are art developments in which nationally we stand pre-eminently forward.

Another gold medal, together with a premium of 25*l.*, is given for the reproduction in line engraving of a study from the life. Engraving is not itself taught in the schools, but the recent establishment of the prize gives renewed encouragement to the pursuit of an art that in these latter days meets with scant success.

The encouragement of mural painting is seen in the lately established annual prize of 40*l.* for the best design for the decoration of a portion of a given public building. Where practicable, the student will carry it out on the spot for which it was designed, and so practically acquaint himself with the manipulation of a form of art in which many of the greatest artists of past days have reached their highest flights and built up their most lasting fame.

There are other awards of a minor character, but it is *needless here* to particularise them. Those we have already

referred to are a sufficient proof of the great inducements held forward by this great body, and we cannot but feel that so noble a school deserves full tribute of public appreciation. It does not forget that the grace of talent and the crown of genius are not in the giving of human hands, but it remembers also that if it cannot implant the powers that stamp the artist, it can arouse them, strengthen them, and arm them with knowledge. This is the work that for over a century it has appointed itself to do, and right well has it fulfilled its pledges.

CHAPTER VI.

The Society of Arts—The 'Stock' prize—prizes for art-workmanship—Lectures on art—Specimen examination paper on art—The Royal Institute of British Architects—Programme of the examination—The Soane Medallion—Tite prize—Grissell medal—Institute medals—Pugin travelling scholarship—Godwin Bursary—Training of the engineer student—Civil engineering school of the University of Dublin—Programme of work and specimen examination papers—The place of drawing in the local examinations of the University of Edinburgh—Its degrees in science of engineering: the ground covered—Increasing love of art—Art at the Social Science Congress—Winter exhibitions of the Royal Academy—The Arundel Society—The Slade professorships—The Goodall art-scholarship—The art-school of University College, London—The art-professorships at Oxford and Cambridge—Courses of art-lectures—The Ruskin art-school—The Watson Gordon chair of fine art at Edinburgh University—Regulations for its management—The Torry bequest—Suggested course of lectures for an art-professorship—The Roscoe professorship of fine arts of the University College, Liverpool—The qualifications of an art-professor—What, after all, is the use of art?—The value of even a slight knowledge and proficiency—Conclusion.

THE Society of Arts, founded in 1754 'for the encouragement of arts, manufactures, and commerce,' has latterly done but little for fine art,[1] its council doubtless considering that the field is sufficiently covered by the action taken by the two great bodies dealt with in our previous chapter. It however did good work in earlier years, and Mulready, Eastlake, and Millais are amongst the names that figure in its list of prize-winners. Amongst its premiums we find a silver medal, the 'Stock' prize, so called from the donor of the fund, for the encouragement of drawing, sculpture, and

[1] *In its charter* we find 'bestowing rewards in the various departments *of the fine* arts' one of its avowed aims.

architecture, and in later years the Society has held exhibitions of art-workmanship, and offered prizes for such technical branches as chasing, wood-carving, and the like, a most useful field of labour, though lying somewhat outside our present scope. The titles of some of the lectures given in a recent session will sufficiently indicate the special and valuable line taken by the Society: they are as follows:—'Art-decoration and furniture;' 'Art-iron work;' 'The art of book-binding;' 'Art in Japan.' Though fine art figures as a subject in the annual list, it will be seen by a perusal of the following paper, one of those set in the 1880 examination, that the decorative aspect of the question is the one almost entirely dwelt on. The declared object of the paper is to ascertain that the candidates possess a general knowledge of art as applied to industrial productions, a power of designing artistic objects, and an acquaintance with the principal objects of industrial art which are exhibited in well-known public and national museums.

Make a sketch design for a three-branched metal candlestick, to be of hammered and chased work, 12 inches high, on a scale of 6 inches to a foot.

Make a sketch design of a buffet or small sideboard, with cupboards and shelves, 5 feet in length, and 3 feet 6 inches in height, on a scale of 6 inches to the foot; the character of the ornament need only be slightly indicated.

Make a sketch design for decorating the handle of a door and the handle of a knife, stating what and how the materials are to be used.

What principles have you followed in making one or other of the above designs? State the considerations which lead you to follow these principles.

What do you understand by balance of form, balance of mass, balance of colour? Quote examples in which these qualities are displayed.

Of what artistic value are panels to a door? What objections might be urged in respect of an unpanelled door?

Who was François Du Quesnoy? When did he live?

For what sort of workmanship was he notable? Describe briefly any specimens with which you may be acquainted.

What is niello? What is damascened work? What is marquetry? Describe briefly specimens of the above with which you are acquainted.

How do you describe the characteristics of the ornament commonly used for Rhodian tiles, for Arab wood-carving, for Chinese Nankin ware?

In what branches of art did the following artists produce works:—Francia, Benvenuto Cellini, Albert Durer, Quintin Matsys, Alonso Cano, Michael Angelo, Phidias, Gouthiére? When did they live? Where are examples of their works to be seen?

Describe the gates known as the Hampton Court gates.

For what was the monk Theophilus celebrated? When did he live?

Describe the cartoons designed by Raphael, and in what material have they been reproduced?

What difference in method of workmanship is there between a specimen of Japanese cloisonné enamel and one of a medallion or casket of sixteenth-century Limoges enamel?

The student whose tastes or opportunities point to a career as an architect will probably see the desirability of enrolling himself under the banner of the Royal Institute of British Architects. Before going in for the examination he will be required to give authenticated proof of his ability in drawing, and it is only when these have passed the Council that the candidate is allowed to sit for the examination. This examination is partly by written work and partly oral. The programme is as follows:—

PROBATIONARY WORK.

The plan, elevation, and section of a building of the candidate's own design (not necessarily extensive or elaborate), with a perspective drawing, one sheet of details, and a drawing of some ornament from the round or relief. These drawings must be entirely the work of the candidate's own hands, but it *is not necessary* that they should be specially prepared for the *examination.*

Optional Work.

Specimens of the candidate's work as a student, such as measured drawings, notes or essays on architectural subjects, may accompany the probationary work.

Work to be Done in Presence of the Examiners.

History of Architecture (to be illustrated by sketches).—An outline of the leading peculiarities of the principal styles of architecture, with the special characteristics and history of any one of the following periods, as the candidate may select, namely:—The history of Greek or Roman architecture; the history of the architecture of Italy or France from the tenth century to the end of the fourteenth century; the history of the architecture of Italy or France from the beginning of the fifteenth century to the present time. The history of the architecture of England for some one century between the years 1100 and 1700 A.D.

Mouldings, Features, and Ornaments of any one Architectural style (to be illustrated by sketches).—The words 'architectural style' may be understood as meaning Greek, Roman, Byzantine, Romanesque, one period of Gothic (English, French, German, or Italian), Renaissance, or one of the transitional varieties.

Materials and Construction.—The nature and properties of building materials, including their decay, preservation, quality, and strength, and their application in building. The principles of construction as applied in practice to foundations, walls, arches, vaults, roofs, floors, and partitions. Drainage, sanitary arrangements and requirements. The application of formulas for calculating the strength of materials. Shoring and underpinning, and dealing with ruinous and dangerous structures.

Specifications and Methods of estimating the Cost of Erecting any Building.—Lithographed drawings of a building of not unusual character will be prepared, and the candidate will be asked to write a specification of the work required in one trade; he will also be asked some questions tending to elicit his knowledge of the mode of specifying for other trades and of estimating cost.

The Plan of a Building, with the details of Arrangement for a selected purpose, adapted to a particular Site.—The plan of a site will be put before the candidate, and he will be required to fill in (to a scale of $\frac{1}{8}$ of an inch to a foot) the detailed arrangement of a building for a given purpose, as, for example, a parsonage for a town parish, a residence for a surgeon or other practitioner, a suite of offices. For the guidance of the candidate a short statement of the special requirements will be set forth. A plan of one upper floor and of the roof may be added by the candidate, if required to explain his scheme.

Professional Practice.—The general conditions usually appended to a specification and contract. The oral examination on the probationary work and on the written and graphic examination.

The number of marks allowed by the examiners will be 600, thus subdivided :—

	Marks
History of architecture, illustrated by sketches	100
Mouldings, features, and ornaments of any one architectural style, illustrated by sketches	75
Materials and construction	200
Specifications and methods of estimating	125
Plan, adapted to a particular site	75
Professional practice	25
Total	600

A candidate to be entitled to pass must obtain at least half the number of marks (namely, 300), though this proportion need not necessarily extend to each of the several divisions.

The Institute of British Architects holds out many substantial inducements to its students and members. Amongst these we may mention the Soane medallion, the Tite prize, the Grissell medal, the Institute medals, the Pugin travelling studentship, and the Godwin Bursary. The Soane medallion is open to all members of the architectural profession under the age of thirty. The subject given out to the competitors for the season 1882–83 is a design for an Academy of Music, including a theatre, concert-room, class-rooms, and a suite

of apartments for the professors. A further award of 50*l.* is given to the successful competitor upon satisfactory arrangements being made for his going abroad for a period of six months, in order to pursue his studies, within two years after receiving the medallion. He will be required to submit to the Council satisfactory evidence, in the form of drawings, sketches, and notes, of his industry. The Tite prize is of the value of 30*l.*; the requisite drawings for the 1882–83 season have a bank in the Italian style as their subject. The prize is the result of a bequest of the late Sir William Tite. The Grissell gold medal, also a bequest, is open to all members of the profession who have not been in practice longer than ten years. The Institute itself gives two silver medals, and two sums of ten guineas for the best sets of drawings and the best essay respectively. The drawings have to be made from actual measurement of some important building, and the subject of the essay (1882–83) is the stall-work canopies and rood-screens of the fifteenth century.

Candidates for the Pugin travelling studentship, founded for the promotion of the study of the mediæval architecture of Great Britain and Ireland, are required to send in their applications and testimonials, together with a select number of their drawings and sketches. Any person of whatever nation is eligible as student, who is more than eighteen and less than twenty-five years of age, but no person who has once held the studentship can be re-elected. Candidates are required to sign or initial all the drawings and sketches submitted, in order that they may be easily identified and returned to their respective owners after the election. A numbered list of the drawings submitted must be sent in with each application. Each candidate must send with his drawings and testimonials a *bonâ fide* statement in writing that all the drawings he submits have been entirely made by himself. He must also send at the same time a certificate of his birth properly attested. The successful candidate must forthwith sign an undertaking to make a tour in some

part of the United Kingdom of not less than eight weeks' duration, and to devote such tour to the study of the mediæval architecture of Great Britain and Ireland ; and he must, before the first Monday in January following his election, deliver to the Institute a paper descriptive of his tour, illustrated by sketches and measured drawings. The candidate for the Pugin travelling studentship who is placed second by the Council will be eligible to receive the Sharpe prize of books to the value of 9*l.* 15*s.*

Candidates for the Godwin Bursary, founded for the promotion of the study of works of modern architecture abroad, must send in their applications and testimonials, together with a select number of their drawings and sketches. Any British subject of any age is eligible, but no person who has once held the bursary can be re-elected. The successful candidate must forthwith sign an undertaking to make a visit of not less than five weeks' duration to some part of Europe (other than Great Britain and Ireland) or America, specially to study, examine, and report on some of the best specimens of modern planning, modern modes of construction, drainage, water supply, ventilation, and other sanitary arrangements to be found in the place or places he undertakes to visit ; and he must, before the first Monday in November following his election, deliver to the Council of the Institute an illustrated manuscript memoir descriptive of the same. The holder of the bursary will receive 40*l.*, to be paid in two instalments, the first on leaving England, and the second on submitting satisfactory evidence of his studies abroad.

Those who propose to become engineers will find it advisable either to enter themselves with some large engineering firm of repute, or to get into some such great railway works as those of Swindon, Crewe, or Stratford. A considerable knowledge of drawing is however desirable, as such positions as those we have named, in their practice of *manual dexterity*, are not altogether favourable to the pick*ing-up of* draughtsman's work.

A very good school for the rising engineer has been established since 1842 in the University of Dublin, with the view of combining the theoretical and practical instruction requisite for the profession of civil engineering, and of imparting to the members of that profession the other advantages of academical education. The professional course continues for three years, and includes mineralogy, hydraulics, geology, mining, and so forth, though we need here only dwell on the part that drawing plays in the scheme of work.

The first, or 'Junior year,' as it is termed, calls for eighteen weeks' instruction, one to two hours daily, in practical plane geometry, the use of instruments, the use and construction of scales, the intersection of solids, developments of surfaces, orthographic and isometric projection. The following questions are illustrations, taken from the examination papers, of the scope of the opening studies of the young engineer.

1. A point is distant $1\frac{1}{4}$ inch from the centre of a circle of $1\frac{1}{8}$ in. diameter. Find by construction the points where tangents drawn from the given point will touch the circle.

2. An ellipse has major and minor axes 2 inches and 1 inch respectively. Find at least five points in one quadrant by one of the constructive methods, and draw the curve through them. Draw a tangent to it at any point in the curve.

3. Draw a diagonal scale of 8 ft. to 1 in. to read to single inches, and having a range of at least 20 ft. Plot from it a triangle whose sides are 12′·8″, 9′·9″, and 16′·5″, and scale off the length of the perpendicular let fall from the apex on to the longest side. What is its representative fraction?

4. The vertical and horizontal traces of a plane make angles of 45° and 60° respectively with the ground line. What is the inclination of the plane to the two planes of projection?

5. A right cone, having a height of 2 in. and a base $1\frac{3}{4}$ in. diameter, is penetrated by a cylinder $\frac{5}{8}$″ diameter, whose axis is horizontal, and intersects the axis of the cone at a point half way up. Draw the plan and elevation of the cone when the axis of the cylinder in plan is—

(*a*) parallel to the vertical plane ;
(*b*) inclined to it at an angle of 45°.

6. The vertical projections a', b', c' of three points A, B, C are respectively $\frac{3}{8}$, $\frac{1}{8}$, and $\frac{1}{4}$ in. above the ground line xy; whilst their horizontal projections a, b, c are $\frac{1}{4}$, $\frac{1}{8}$, and $\frac{5}{8}$ in. respectively distant from it. Find the traces of the plane containing these three points, when $ab = \frac{1}{2}$ in. and $bc = \frac{3}{4}$ in.

7. Project a prism whose cross section is a rectangle $\frac{3}{4}$ in. by $\frac{1}{2}$ in., and whose length is $1\frac{1}{2}$ in., resting on one of its shortest edges, with its axis making angles of 60° and 45° with the horizontal and vertical planes respectively.

8. Construct the true isometric scale corresponding to a scale of three inches to a foot, graduating it to give quarters of an inch.

In the middle year machine-drawing is entered upon, the projection of shadows thoroughly studied, and so forth; this represents twenty hours' work a week for thirty weeks. This too is followed by an examination. The third or senior year represents the same amount of time, the subjects being carried further. Works in actual progress are reported on, studied, measured, and drawn by the students, and they have the further advantage of a very fine reference library.

In the local examinations of another university, that of Edinburgh, drawing as a test of attainment for pupils of schools is an optional subject, and is confined to drawing in outline from the flat. Candidates for honours certificates, however, take up drawing or painting from a model, giving light and shade, and also drawing in perspective. The same university bestows degrees in science, one section being engineering. As a portion of the work for this, the candidate is required to be able to make plans and sections of buildings and machinery, and to make sketches with figured dimensions from actual objects. He must also have a knowledge of the principles of design in machinery, and be able to furnish specifications and estimates. The course of study includes the construction of iron and wooden bridges, arches and walls in masonry, embankments, cuttings, break-

waters, aqueducts, roofs, harbours, drainage, mill-work, reservoirs, &c.; a sufficiently comprehensive course.

We might in the same way, did space permit, refer to the fine-art classes at King's College, London, the Trades and Mining School at Bristol, and many other centres of art-activity all equally worthy of our attention; but much in this direction must perforce be omitted, nor indeed is it necessary for our purpose to give more than a few salient examples of what is doing.

The increasing love of art is seen in the enormous sale of such excellent periodicals as 'L'Art,' the 'Art Journal,' or the 'Magazine of Art.' One can enter into but few households where one or other may not be seen. We see it again, too, in the regularly constituted art department that has become an invariable feature in the Social Science Congresses, wherein those who are tired of discussions on jurisprudence, the repression of crime, or the treatment of habitual drunkards, may find welcome refreshment.[1]

The liberal manner, too, in which owners of valuable and world-famed pictures have lent them for the winter exhibitions of the works of the Old Masters at the Royal Academy, and the great appreciation shown by the public and by art-students of the exceptionally advantageous opportunities thus afforded them of seeing such masterpieces, is another of the signs of the times.

The formation, again, of such societies as the 'Arundel,' for promoting a knowledge of art by the annual circulation of high-class publications, the multiplication of 'Art Unions' for the dissemination of works of art, the circulation of illustrated books and newspapers, and the crowds that block the

[1] In the 1881 meeting at Dublin we find the following papers amongst others:—The Influence of Annual Exhibitions of Contemporary Pictures and Sculpture on Art and Public Taste. The Relations of Painting and Sculpture to Architecture. The Condition of Copyright as regards Music, Painting, Sculpture, and the Fine Arts generally. Æsthetics and False Art. The Refining Influence of Art. Persepolitan and Roman Periods.

pavement in front of every picture-dealer's or printseller's window are all in their degree proofs of the working of the leaven of art. As we write, an article comes under our eye describing a picture exhibition, the formation of a society for the encouragement of the fine arts, and the establishment of an art gallery at Simla, and we read at the same time of a similar scheme for Poonah; while on our table is a bulky report on the schools of art in Victoria, and only the exigencies of space forbid us quoting at large from the prospectuses, addresses, prize lists, statistics of attendance, and other most interesting features it contains; a most interesting record altogether of the art-vitality of the antipodes.

We have now traced our art-student from his earliest school-days, from the infantile days when perchance he made his first appearance at the Kindergarten, to the preparatory establishment, and thence to the great public school. On leaving this his general studies gave way to his special requirements, and we have seen him either joining some art school of the Science and Art Department or that of the Royal Academy, or perchance going in for a still more technical course as an architect or engineer. This does not altogether exhaust the possibilities, though it would have done so some few years ago, but since art has claimed a recognised place in our universities our book would not be altogether complete without some little reference to these additional opportunities of acquiring art-knowledge.

The University College of London has one of the three valuable 'Slade' professorships, the other two being assigned to Cambridge and Oxford. These all spring from the same munificent source, and are tenable for three years in the first place, though the holder may afterwards be re-elected for one or more such terms. There is also a Trevelyan-Goodall art-scholarship of the value of 20*l.*, tenable for three years, in the Slade School of fine art in the college, by former *pupils of* the art class in the school. The 'Department *of the Fine* Arts' occupies the north wing of the college

buildings; this contains a drawing 'Theatre,' which is the largest in this country. This, and all the other working rooms are well lighted by windows having a northerly aspect. The course of study differed somewhat originally from the system ordinarily pursued in most of the high-class art schools, but the direction of the teaching in all the Slade schools is subject to certain changes, owing to the election every few years of new professors who may import new methods of work, and we cannot definitely say that any system taken up will necessarily remain intact.

In ordinary art-schools a lengthened study of the antique is required before permission is given to draw from the living model, but the course of work laid out by Mr. Poynter, the first Slade professor at University College, made the study of the living model of first and paramount importance. The ordinary system is regarded by the author of this change 'as the principal cause of that want of sound knowledge of drawing and method of painting which is commonly found in our artists as compared with those of foreign schools.' The following remarks from the prospectus issued will be read with interest.

Until the student knows something of the construction of the human body from the living model, it is impossible he can understand the generalised and idealised forms in Greek sculpture. Experience shows the extreme difficulty which a student finds in connecting the forms in the antique model with those given in the anatomical books and figures before he has learnt to understand them in the living figure.

In the second place, the habit acquired in drawing for a long time, sometimes through a course of two, or even three years, from casts from the antique, which are by their nature motionless, and can always be kept in exactly the same relations of light and shade, renders the student helpless when he comes to work from the living model, who can never remain quite still, or take twice running precisely the same position.

Thirdly, the desire of English students to paint, exhibit, *and sell pictures* makes them so impatient of instruction that

it is difficult to get them to follow out any course to the end. Hence one result of a long course from the antique is that they frequently begin to paint for exhibition without having thoroughly acquired the habit of working from nature; and thus, finding themselves helpless before the model, they trust to their own facility for working, as far as possible, without nature, aided by the small amount of probably erroneous knowledge gained in making elaborately stippled drawings from casts; and this habit once formed is never shaken off, and further knowledge is never acquired. Or, on the other hand, the student, feeling the system to be a wrong one, has a profound distrust of any course of instruction, works from nature without guidance and at his own discretion, and finds his powers crippled for life for want of that knowledge which a good system of study in his youth would have given him.

Six Slade scholarships of the value of 50*l.* per annum, and tenable for three years, are another outcome of the noble liberality of the founder.

The Cambridge Slade professorship dates from the year 1869, the same time as those of the two other universities. It is tenable on the same terms, periods of three years, as the others, but the professor is not required to take up residence. The election is made by a board consisting of four members of the university resident at Cambridge, and three non-resident. The resident members are the Vice-Chancellor and three persons of the electoral roll; the non-resident are the President of the Royal Academy, the President of University College, London, and one of the higher officials of the British Museum. The professor is required to give annually a course of not less than twelve lectures on the history, theory, and practice of the fine arts, or some section of them. These lectures are given in the lecture-room of the Fitzwilliam Museum.[1]

[1] The following are given as examples of the courses of lectures delivered:—1. On the Amazons, their place in Greek Mythology and Art. 2. The Amazons and Hercules. 3. The Amazons and Theseus. 4. The Amazons and Achilles. 5. The Amazonomachia in Greek

At Oxford theoretical teaching and practical instruction are happily blended. The authorities were highly favoured in inducing the great art critic, John Ruskin, to hold the first Slade professorship. Not only has he shed lustre on the position by his genius, but richly endowed the school with valuable works of art for the use of the students—works, many of them, that no money could replace: choice Turner drawings, studies by William Hunt and Samuel Prout, mediæval illuminations, rare Durer prints, and the like. The school is open daily during term time for the practice of art from 8 A.M. until 6 P.M. Professor Ruskin was appointed in the year 1869, and on the termination of the first three-year period was twice re-elected for other like periods. Feeling the need of some preliminary art-instruction in the case of many who attended his lectures and classes, he presented the University with a gift of 5,000*l.* for the establishment of a drawing school and the endowment of a teacher. His system of teaching consisted in carefully selecting examples of the best art of every kind, and then setting his students either copying these or drawing from the cast or from nature, with these choice examples constantly at hand for guides as to treatment and method. The student is further greatly aided by the valuable catalogue of the reference series written by the author, and abounding in sterling advice and quaint criticism. The election to the Oxford

Sculpture. 6. Single Figures of Amazons in Greek Sculpture. 7. Amazons in Greek Painting. 8. Amazons in Greek vase-decoration. 9. Amazons in Miscellaneous Forms of Art. 10. The Painter Engravers of Italy and the North, A.D. 1450–1550. 11. What is Engraving? 12. Place of Engraving among the other Arts at the Renaissance. 13. Origin and Character of the Art in the North. 14. Origin and Character of the Art in Italy. 15. Progress of the Art in the North Schools of Franconia, the Upper and Lower Rhine, and the Netherlands. 16. Same subject continued—Martin Schongauer. 17. Progress of the art in Italy—Schools of Florence and Lombardy. 18. Same subject continued—Mantegna, Jacopo de' Barbari. 19. Durer, the typical engraver of the North. 20. Marcantonio, the typical engraver of Italy. 21. Reaction of Italy upon the North—Lucas van Leyden. 22. Same subject continued—The Little Masters.

Slade professorship rests in the hands of a board of seven persons, viz. three curators of the University Galleries, Bodley's librarian, the President of the Royal Academy of London, the President of University College, London, and some one person appointed by the executors of Mr. Slade.

The University of Edinburgh has still more lately appointed an art professor, but on reference to the regulations drawn up we find that the teaching is to be entirely by means of lectures. The endowment fund is 11,000*l.*, and an additional thousand pounds is provided for the expenses of the class, the providing of suitable materials for illustration, and so forth. The deed of trust of the founder will be found in detail in the University Calendar for 1873–4, but the appointment was not actually made until 1880. Sir James Erskine of Torry, by will dated April 1834, bequeathed to the University of Edinburgh his pictures, bronzes, and marbles, for the purpose of laying the foundation for a gallery for the encouragement of the fine arts. The pictures, forty-six in number, which are in the finest preservation, have been collected with judgment, as good specimens of different masters, especially in the Flemish and Dutch schools. These, together with seventeen marbles and twenty-three bronzes, form what is called the Torry Fine Art Collection. In the Senate Hall, library, and court-room, are numerous portraits and busts of the principals, benefactors, and other persons of note in any way connected with the university. Some of these are by Raeburn and other well-known men, while amongst the busts we find works by Chantrey and Flaxman.

The following regulations for the management of the Watson-Gordon chair of fine art have been drawn up and adopted by the Senate.

1. The object of the institution of the Watson-Gordon professorship of fine art is stated in the deed of foundation *to be 'the promotion* and advancement of the fine arts and *prosecution of* the studies of painting, sculpture, and architec-

ture, and other branches of art connected therewith, in Scotland.' In accordance with this definition, and in order to give greater solidity to the teaching of the Chair, it is to be understood that it will be the business of the Watson-Gordon professor to provide a course of instruction suitable for those who are elsewhere studying art professionally, and who intend to follow some branch of the fine arts as a profession.

2. At the same time the Watson-Gordon class-room is by no means to be employed as a technical school: it is not to be used as an academy for the practice of drawing or any other branch of manual dexterity on the part of the students. The professor himself will doubtless illustrate his teachings by demonstration of design. But the object of the Chair will be to impart full knowledge and correct ideas with regard to 'the history and theory of the fine arts, including painting, sculpture, and architecture, and other branches of art therewith connected;' and the classes will be open to all students wishing to attend—to those who wish to study the history and theory of art as a part of general culture, as well as to those who have professional objects in view.

3. The teaching of the Chair shall consist of a continuous course of instructions occupying at least twenty weeks of each winter session. These instructions shall include suitable written exercises to be required from the students, as well as examinations, in addition to the lectures to be delivered by the professor; and the lectures shall not be fewer in number than forty during each winter session.

4. At some time during his complete course, whether that course be extended over one or more sessions, the professor shall lecture upon each of the great historical developments of art, such as the sculpture and architecture of the Greeks, the architecture of the middle ages, and the painting of the Renaissance. The choice of all other topics connected with the history and theory of art shall be left to the discretion of the professor.

We have no programme or syllabus of any of the lectures that have been delivered, but it is evident that a full course of lectures, delivered in accordance with the regulations drawn up, would be of the greatest interest and value.

Failing a knowledge of what has been done, we venture to suggest the following syllabus, as our own rough idea of what such a course of lectures should be.

Architecture.—Egyptian. Pyramids, tombs, temples, obelisks, and columns, Karnac, Luxor, Dendera, Philæ. Chaldæan temples, Assyrian remains. Use of the arch. Nineveh, Khorsabad, Kouyunjik. Temples of Persepolis and Susa. Lycian remains. Greek: Pelasgic. History and structure of the orders. Doric temples in Greece and Sicily. The temple of Theseus. Ionic order: the temple of Athene at Priene. The Corinthian order: the monument of Lysikrates at Athens. Temples of Pæstum. The Erectheum of the Acropolis. Dimensions of Greek temples. Hypæthral, dipteral, &c. Mode of lighting. Caryatides. Theatres. Tombs. Etruscan and Roman work. Free use of the arch. Composite order. Dome introduced. Pantheon, basilicas, theatres and baths. Colosseum. Supercolumniation. Triumphal arches and columns. Pompeian remains. Bridges. Aqueducts. Early Christian Churches in Rome. The monuments of Ravenna. Circular churches. Mohammedan art. The Alhambra, Mosques of Cordova, Damascus, and Çairo. The Giralda of Seville. Persian mosques and tombs. Hindu rock-cut tombs and temples. The Taj-Mehal at Agra. Lombard work: Milan, Piacenza, Verona. Romanesque: Worms, Spires. Byzantine architecture: St. Mark's, Venice; St. Sergius and Sta. Sophia, Constantinople. Russian examples at Kieff, Moscow, &c. Saxon remains. Norman work. Characteristics of early, decorated, and perpendicular Gothic. Scottish architecture: Elgin, Melrose. The round towers of Ireland. The buildings of Anjou, Auvergne, and Burgundy. Chartres, Rheims, Amiens. Flamboyant tracery. Rose windows. Vaulting. Spires and towers. The typical English and Continental Cathedrals. The Town-halls of the Low Countries. German Gothic. Bonn, Cologne, Strasburg. Scandinavian work. Italy. Tudor work. Renaissance: St. Peter's at Rome; the Louvre. The Glyptothek and Pinakothek at Munich. Modern work.

Sculpture.—Conventional character of Egyptian work. *The Sphinx.* Colossal figures. Egyptian mythology. Affinity *in art of* Nineveh with Egypt. Assyrian mythology. Cunei-

form inscriptions. Lions and bulls of Kouyunjik. Monuments of Susa and Persepolis. The Sculptures of antiquity represented on coins. Shield of Achilles. Golden Jupiter in temple of Belus. Herodotus, Diodorus Siculus, Strabo, and Josephus on ancient art. Statues of Memnon at Thebes. Destruction under Cambyses. Greek art. The lion gate of Mycenæ. Bronzes. Greek mythology. Pliny's history of painting and sculpture. Minerva of Phidias. Chryselephantine Sculpture. Carving on gems. Venus of Praxiteles. Doryophorus of Polycletus. Discobolus of Myron. The remains from Eleusis. The Laocoon. The Niobe and her daughters at Scopas. Etruscan Sculpture. The Elgin marbles. Colour on Greek statues. Drapery treatments. Colossus of the Sun at Rhodes. Metopes of the Parthenon. The Harpy monument. Caryatides. Lycian remains. The tomb of Mausolus. Rome. The Wolf of the Capitol. Arch of Titus. Trajan's Column. Early Christian art: St. Ambrogio, Milan; Sculptures in Christian Museum of the Lateran. Byzantine influence. Ivory carvings, ancient and mediæval. The Ravenna chair. Gothic sculpture in France, Germany, and Britain. The Grotesque. Symbolism. Works of Andrea Pisano. Milan Cathedral. The Campanile of Giotto. Reliefs of Luca della Robbia. Terracotta as an art-material. Thorwaldsen. Flaxman; his connection with Wedgwood, and designs from Homer, Æschylus, and Dante. Works of Nicholas and John Pisano, at Pisa, Sienna, and Orvieto. Works of Donatello and Brunelleschi. Bronze gates of Ghiberti. Peter Vischer and the German school. Michael Angelo. Benvenuto Cellini. Bernini. Canova. Wood carving: Grinling Gibbons. India: Sculptures of Elephanta and Ellora. Japanese work.

Painting.—Mural paintings of the Egyptians. Greek art, Polygnotus, Apollodorus, Zeuxis. Pompeian wall-paintings. Painting in tempera: Cimabue, Giotto, and Fra Angelico. The colours employed. Wax painting or encaustic. Mosaic, Roman and Byzantine: St. Mark's, Venice, and Ravenna. Illumination, its history and practice: the works of Giulio Clovio. Miniature painting on ivory and enamel. Incrusted, translucid, and painted enamels. The School of Limoges. Painting on Pottery. Greek vases. Majolica, Gubbio, and

[illegible] Bernard Palissy. Fresco and fresco secco: [illegible] Masaccio?, Botticelli, and Ghirlandaio. Oil painting: composition of colours, oils and varnishes. The Van Eycks. Water-colour: permanence or the reverse of the pigments employed. The works of Paul Sandby, Cozens, Girtin, Varley, Prout, and Cox. Comparison. Keeping. Manipulation. Colour-blindness. Other artistic processes as glass-painting, engraving, etching, lithography, carving in wood, tapestry. Picture-restoring and cleaning. Signatures and monograms. Decorations. [illegible] Florentine School: [illegible] Cimabue, Giotto, [illegible], Fra Angelico, Filippino Lippi, Leonardo da Vinci, [illegible], Andrea del Sarto. Roman School: Raphael, [illegible]. Venetian School: Mantegna, Sebastian del Piombo, Bellini, Giorgione, Titian, Tintoretto, Veronese. Neapolitan, Genoese, Lombardic and Bolognese Schools: [illegible] the Caracci, Domenichino, Salvator Rosa. The Spanish School: [illegible] Murillo. [illegible] German School: Dürer, Cranach, Mengs, Holbein. The Flemish School: the [illegible] Rubens, Teniers, and Snyders. Dutch School: Rembrandt, [illegible] French School: [illegible] Poussin, Watteau, [illegible]. English School: Hogarth, [illegible] Constable, [illegible].

[illegible] answer [illegible] and [illegible]

[illegible]

the noble educational establishments that have lately risen or are still rising amongst us, the fruits of public appeals or the gifts of princely individual munificence, such professorships may soon cease to be exceptional.

The professors appointed to such posts should be men of artistic experience and practical knowledge. Such a proposition, when laid down, seems too evident to need the stating, yet there is some little danger, possibly, that such posts may fall into the hands of amateurs of more or less university status, and that one of 'our men' may naturally be selected by the authorities from the list of candidates. Where M.A. is as good as R.A., or any other professional authority, this amiable weakness is fully excusable, but not otherwise. Besides the possibility of not getting the best men available, the man of Academic training will naturally incline to the general tone of the studies around him, and his students will hear much of the Parthenon and the myths of Hellas, and but little, maybe, of the great world of art-interest that lies beyond these too narrow bounds. Phidias was one of the greatest artists the world has ever seen, and the shrine of the virgin goddess one of the noblest buildings man has ever devised, yet the grandeur of Amiens or Chartres should impress us too, and the names of their architects should be enshrined in our appreciative remembrance. Zeuxis may have been worthy of a position in the first rank of art, but even granting this, we may not forget that he will find his fellows there in Raphael, Titian, and many another noble name that cannot die.

And now, as we draw near to the end of our labours, the question arises, that is so often and justly asked in so many directions, *Cui bono?* Even in the most utilitarian aspect, the assistance to writing, the power of representing the thing you wish made by your builder or carpenter, the aid of being able to replace a tedious and imperfect description by a few telling strokes of the pencil, are well worth having; but in a higher sense the possession of a knowledge and love

of art is an ever-welcome possession. By its means all the glorious works of nature vividly appeal to us either in our admiration of their own beauty or our appreciation of the skill by which the artist has placed them before us. The forms of the great departed yet remain to us in the portraits by Titian and Vandyck, and noble deeds of heroism live alike in history and yet more truly by the aid of art. For thousands of years the arts of architecture, sculpture, and painting have had their recognised place in the world. There is a something, a subtle influence in the soul of man, that asks for something higher and better than the mere satisfaction of the animal nature. The lower animals appear to have no sense of the beautiful either in nature or in art; who, for example, to bring forward a simple illustration, ever saw a cow or a horse give themselves five minutes' pause to gaze on the grandest sunset that ever spread its gorgeous tints across the evening sky and threw its golden glow in dazzling splendour over earth and heaven? All the lower works of creation fill to admiration their appointed sphere, but when they had sprung into being Omniscience gave a pause, and man, the crowning work of all, received a higher nobility, being fashioned in the very image of his Creator. This image, blurred as it has been, has never been wholly lost, and the noblest work that has ever been done in art has been 'the expression of man's delight in God's work,'[1] or the desire to honour Him by offering for His service the noblest and most beautiful productions. Dramatic art is most intensely earnest when, as at Ober-Ammergau, it offers itself amongst the mountains on the shrine of religion, and thrills the audience with a sense of the greatness of the sacrifice enacted on the sad hill of Calvary. The grandest music the world has ever heard has risen from the temples of the Most High. The noblest architecture, the finest sculpture, the choicest works of the painter, have all been dedicated in the same service. It is true that the *majestic dignity* of Egyptian sculpture and the magnificence

[1] Ruskin.

of its architecture were devoted to those who were no true gods—true again that the glorious Parthenon enveloped the shrine of an earth-born goddess, and all the grace of Greek art tended only to deify that which their own hearts had conceived, and to give ideal glory to the wood and the stone their hands had carved; yet our statement holds true almost literally, and wholly in spirit, for both the Egyptians and the Greeks believed most thoroughly in their deities. All the noblest art-work will be found to strive after a high ideal, and as it attains to or falls below this lofty aim, so does it grow or diminish in sterling value. Tried by this standard Greek art stands on a lofty eminence; the human figure in all its masculine vigour or feminine grace was its almost exclusive subject. Japanese art too is in all respects excellent. They have a thorough enjoyment of the beauties of nature, and will in a few masterly touches express any form, from the springing bamboo to the grand snow-clad cone of Fusi-yama, rising from the sea-bordered plain and gleaming in silver against the azure sky. The human figure abounds too in their work, and is given with admirable truth and expression, while the large statues of the sitting and contemplative Buddha are as noble in their dignity and solemn repose as the grand colossal figures of Amenoph or Rameses that still, immutable amidst the shifting sands of the desert and the centuries of time, keep their watch over the land of the Pharaohs, and carry us back by their presence to the childhood of the world.

To the artist is given this high and noble mission, to bring home to the minds of men all that is brightest and best, to record the noblest deeds with a vivid force that drives them home to the heart, and to delineate all that is fairest and grandest in the material world, bringing home the charms of nature to those who cannot reach them for themselves. He who has reached this point, like Milton, is a teacher who justifies the works of God to man, and is in his degree a co-worker with the great Artist who has strewn this *earth with* beauty for the delight of the creatures of His hand.

Beginners too frequently see only their own difficulties and their own small successes; but while they are labouring over their elementary freehand, or congratulating themselves on its approximate resemblance to the copy, it is well for them, by the exhibition of first-class work, to have their industry quickened. Even if their self-complacency be a little checked, their interest is excited as they realise their claim to a share in all the glorious inheritance of art; the grand simplicity of Egyptian sculpture, the perfect beauty of Greek art at its finest, the intensity of devotion of Fra Angelico, the quaint beauty of Giotto, the grand drawing of Michael Angelo, the grace of Raphael, or the glowing tints of Titian, Paolo Veronese, and many another noble name that shines as a star in the diadem of sea-girt Venice.

Even a slight proficiency in art is a source of continual pleasure to its possessor, since it enables one to appreciate not only the beauties of nature, but greatly aids in a fuller and juster estimate of the works of the giants in art. The student who has tried to paint a single primrose appreciates the work of William Hunt in a way that is not possible to those who have not gone through this modest amount of training; and the pupil who has attempted to give the character of a single head realises something, in so doing, of the grandeur of the work of Titian or Raphael. The man who, palette in hand, has stood before some fair landscape bathed in the golden glow of the sunshine realises the pre-eminent power of Turner in a way that it is almost impossible for another to conceive, and finds an ever new delight in studying his work; and the lowliest art-student is the heir to all the heritage of time. All that is grandest in nature or in art is his by a peculiar right; and as the power of execution increases, so, in an ever-increasing ratio, does the appreciation. Art then has its rich reward for everyone, and appeals to all, rich or poor, young or old.

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'A volume of worked examination questions for the use of students at the military and engineering colleges, and also for those who are endeavouring to teach themselves. The preface contains instructions for using the book and some sound advice; but the drawings which form the bulk of the volume are drawn of such a size that they cannot be blindly copied for examination purposes.' ENGLISH MECHANIC.

'A fair knowledge of geometry is assumed, but to certain of the questions notes are appended on special points as they arise, such as might not have been dealt with in the text-book or course that the student has worked through. These notes are very good, and not too long; the Author's experience enabling him to anticipate difficulties and to give warning against pitfalls. . . . This book will be a welcome addition to the appliances of all teachers of the subject, for it will help to fill a wide gap.' NATURE.

'Mr. HULME'S volume on Plane Geometrical Drawing is a very welcome addition to the few really good works on the subject now in use, and may be recommended to the notice of art-students and art-teachers as well worth careful study. It consists of two parts. The first is occupied with a number of examination questions, three hundred in all, which appear to us to embrace at least all the leading principles of the subject. The second consists of sixty-one plates, with two hundred figures, shewing the most approved methods by which the questions are to be worked out. The questions have not been classified, as is very commonly done, the Author being of opinion, after full consideration, that it is better for the student to have them put before him as they usually present themselves in an examination. The preface to the volume contains some useful hints to candidates for examination, and to some of the questions comments are added, which it is hoped will be helpful, especially to those who sometimes find a difficulty in fully grasping an examiner's meaning. So far as we have been able to judge, the Author has usually hit upon the readiest and neatest methods of solving the problems, and any student who makes himself master of these methods ought to have little fear of an ordinary examination test in plane geometrical drawing. The figures are throughout drawn to a good-sized scale, and we need hardly add are remarkable for *clearness and neatness*.' LEEDS MERCURY.

London, LONGMANS & CO.

Castel Durante. Bernard Palissy. Fresco and fresco secco: Benozzo Gozzoli, Botticelli, and Ghirlandaio. Oil painting: composition of colours, oils, and varnishes. The Van Eycks. Water-colour: permanence or the reverse of the pigments employed. The works of Paul Sandby, Cozens, Girtin, Varley, Prout, and Cox. Composition, Keeping, Manipulation. Colour-blindness. Other artistic processes, as glass-painting, engraving, etching, lithography, drawing on wood, tapestry. Picture-transferring and restoring. Signatures and monograms. Cartoons. Tuscan or Florentine School; Margaritone, Cimabue, Giotto, Taddeo Gaddi, Fra Angelico, Filippino Lippi, Leonardo da Vinci, Michael Angelo, Andrea del Sarto. Roman School: Raphael, Perugino, Zucchero, Baroccio. Venetian School: Mantegna, Sebastian del Piombo, Bellini, Giorgione, Titian, Tintoretto, Veronese. Neapolitan, Genoese, Lombardic, and Bolognese Schools: Guido, the Caracci, Domenichino, Salvator Rosa. The Spanish School: Morales, Ribera, Velasquez, Murillo, Zurbaran. German School: Durer, Cranach, Mengs, Holbein. The Flemish School: the Van Eycks, Mabuse, Rubens, Teniers, Vandyck, Snyders. Dutch School: Rembrandt, Ruysdael, Mieris, Terburg, Von Ostade, Gerard Douw, Metzu, Wouvermans, Weenix, Paul Potter, Vander Velde, Van Huysum, Cuyp, Hobbema, Jan Steen. French School: Poussin, Watteau, Lancret, Greuze, Bourdon, Claude. English School: Hogarth, Stothard, Wilkie, Morland, Haydon, Lawrence, West, Blake, Romney, Opie, Gainsborough, Reynolds, Constable, Etty, Turner, Mulready, Landseer.

Such a course of lectures would, we think, fairly answer the requirements of that or any other art-professorship, and in the words of the instructions drawn up for the Watson-Gordon professorship, 'impart full knowledge and correct ideas with regard to the history and theory of the fine arts, including painting, sculpture, and architecture, and other branches of art therewith connected.'

As we are writing, Liverpool is projecting a grand university college; and several professorships, at a cost of 10,000*l.* *each, are already* established. Amongst these we find the *Roscoe professorship* of the fine arts. We trust that amongst

the noble educational establishments that have lately risen or are still rising amongst us, the fruits of public appeals or the gifts of princely individual munificence, such professorships may soon cease to be exceptional.

The professors appointed to such posts should be men of artistic experience and practical knowledge. Such a proposition, when laid down, seems too evident to need the stating, yet there is some little danger, possibly, that such posts may fall into the hands of amateurs of more or less university status, and that one of 'our men' may naturally be selected by the authorities from the list of candidates. Where M.A. is as good as R.A., or any other professional authority, this amiable weakness is fully excusable, but not otherwise. Besides the possibility of not getting the best men available, the man of Academic training will naturally incline to the general tone of the studies around him, and his students will hear much of the Parthenon and the myths of Hellas, and but little, maybe, of the great world of art-interest that lies beyond these too narrow bounds. Phidias was one of the greatest artists the world has ever seen, and the shrine of the virgin goddess one of the noblest buildings man has ever devised, yet the grandeur of Amiens or Chartres should impress us too, and the names of their architects should be enshrined in our appreciative remembrance. Zeuxis may have been worthy of a position in the first rank of art, but even granting this, we may not forget that he will find his fellows there in Raphael, Titian, and many another noble name that cannot die.

And now, as we draw near to the end of our labours, the question arises, that is so often and justly asked in so many directions, *Cui bono?* Even in the most utilitarian aspect, the assistance to writing, the power of representing the thing you wish made by your builder or carpenter, the aid of being able to replace a tedious and imperfect description by a few telling strokes of the pencil, are well worth having; but in a higher sense the possession of a knowledge and love